269176

Work Plan
Dissolved Phase Groundwater Investigation

The Hartford Area Hydrocarbon Plume Site
Hartford, Illinois

Clayton Project No. 15-03095.14.007
June 28, 2004

Prepared for:
THE HARTFORD WORKING GROUP
Hartford, Illinois

Prepared by:
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VIA OVERNIGHT DELIVERY

June 28, 2004

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Subject: ILR000128249 LPC 1190505040 – Madison County
The Hartford Area Hydrocarbon Plume Site / Hartford, Illinois
Work Plan – Dissolved Phase Groundwater Investigation

Dear Messrs. Turner and Faryan:

Clayton Group Services, Inc., on behalf of the Hartford Working Group (HWG), and in accordance with paragraph 51 of the Administrative Order on Consent, is submitting the Work Plan for the dissolved phase groundwater investigation. The plan addresses the investigation of dissolved phase groundwater in the area of the free phase hydrocarbon that is present in the northern portion of Hartford. It also includes sampling of groundwater in an area southeast of the public water supply wells to determine if the groundwater in this area is impacted.

Please contact me with any questions.

Sincerely,

Monte M. Nienkerk

Monte M. Nienkerk, P.G.
Senior Project Manager
Environmental Services

Enclosure: Work Plan – Dissolved Phase Groundwater Investigation

cc: Hartford Working Group
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15-03095.10ca028 / MMN

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1.0 INTRODUCTION/PURPOSE

Paragraph 51 of the Administrative Order on Consent with the United States Environmental Protection Agency (USEPA) in the matter of The Hartford Area Hydrocarbon Plume Site (Docket No. R7003-5-04-001) requires the preparation of this Dissolved Phase Groundwater Investigation Work Plan (Plan). Clayton Group Services, Inc. was retained by The Hartford Working Group (HWG) to prepare the Plan. Figure 1-1 shows the general location of the Village of Hartford, Illinois (Hartford). The Plan presents the known information and data available at the time of preparation of the document.

The purpose of the Plan is to:

- Present a brief summary of the known information regarding the physical setting; specifically, the geology and hydrogeology and the groundwater flow (gradient) underlying Hartford.
- Present the known information regarding the dissolved phase petroleum hydrocarbon impacts in Hartford.
- Conduct sampling and groundwater analyses of the new monitoring wells, installed as part of post-ROST free-phase hydrocarbon (FPH) plume delineation confirmation efforts in Hartford, which do not contain FPH.
- Develop groundwater flow and isoconcentration maps of the identified hydrostratigraphic units (North Olive, Rand and EPA Strata and Main Sand) to assist in delineating the extent of the dissolved phase petroleum hydrocarbon impacted groundwater in Hartford.
- Conduct groundwater analyses from temporary grab sampling locations to further assess groundwater quality surrounding the Hartford municipal water supply wells.

The Hartford site boundaries have been defined by the USEPA as being bounded by Rand Avenue to the north, the nearest railroad tracks to the east side of Olive Street to the east, Donna Drive and the south boundary of Hartford Park to the south, and Illinois State

Highway 3 to the west. The Hartford site boundaries are presented in Figure 1-1. The Hartford site boundaries may differ from the Hartford corporate boundaries.

2.0 SITE DESCRIPTION

2.1 LOCATION

Hartford, Illinois is located in Madison County on the east bank of the Mississippi River upstream from St. Louis, Missouri (Figure 1-1). Hartford lies approximately 3,000 feet east of the Mississippi River. The Shell Tannery Property and the Premcor Refining Group (Premcor) facility are located directly east of Hartford. The BP Amoco (fka Amoco) facility lies north-northeast of Hartford across Rand Avenue. The ConocoPhillips (fka Shell) facility is located east of the Premcor facility. Figure 1-1 shows the respective property boundaries of these facilities and their geographical relationship to Hartford.

2.2 SITE HISTORY

Background information regarding Hartford has been discussed in numerous reports by others. Most recently, Clayton prepared, on behalf of The Hartford Working Group (HWG), an *Investigation Plan to Define the Extent of Free Phase and Dissolved Phase Hydrocarbons in the Village of Hartford, Illinois* (dated January 7, 2004) that presented this information. The following excerpt briefly summarizes the history of the environmental concerns in Hartford.

Odor issues dating back to May 1966 have been documented in buildings in the northern portion of Hartford. In 1978, investigations were conducted due to a series of residential house fires and documented building odor complaints. The investigations identified the presence of FPH beneath the northern portion of Hartford. Additional investigations over the years have also identified numerous underground and aboveground petroleum pipelines in Hartford and the immediate vicinity.

In general, the concerns have been located within an area bounded by Hawthorne Street to the south, Olive Street to the east, Illinois State Highway 3 to the west, and Rand Avenue to the north.

In June 1978, Clark Oil Corporation (Old Clark), the former owner and operator of the Premcor facility, installed a FPH recovery well (RW-1) east of North Delmar Avenue at Forest Street. In 1979, Old Clark installed a second recovery well (RW-2) west of North Olive Street between East Date and East Cherry Streets. In September 1992, Premcor (then known as Clark Refining & Marketing, a different company than Old Clark) installed a Vapor Control System (VCS) in the northern portion of Hartford to address the identified problems. Premcor also installed product recovery well RW-3 sometime in the early-1990s near the southeast corner of the intersection of East Birch Street and North Market Street. The locations of the three product recovery wells in Hartford are shown in Figure 2-1.

2.3 CURRENT PHYSICAL SETTING INTERPRETATION

The geologic and hydrogeologic setting of this area has been presented in numerous reports previously submitted to the USEPA and the Illinois Environmental Protection Agency (Agencies). The following information, which briefly summarizes the geologic and hydrogeologic setting was also excerpted from the January 7, 2004 Plan.

The geographical region around Hartford is known as the American Bottoms, a shallow valley 30 miles long and 11 miles across at its widest point (Engineering-Science 1992). The present landscape and the upper 130 feet of the Hartford area were created by processes (alluvial and glacial) active during the last 125,000 years.

During the Pleistocene, the valley was filled with sandy glacial outwash known as the Mackinaw Member of the Henry Formation (Engineering-Science 1992). The Mackinaw

sands range from 60 to 150 feet in thickness and comprise what is known as the Main Sand (Main Aquifer). The upper part of the Main Sand consists primarily of fine-grained sand. The Mississippian bedrock underlying the Hartford area is believed to be Renault Limestone, a relatively pure limestone and an upper sandy limestone (ISGS *Geology Map of Illinois* 1956). Commonly, bedrock now occurs between 110 and 170 feet below ground surface (bgs) in the valley area.

The uppermost geologic unit is the Cahokia Alluvium of Holocene Age, which consists of sands, silts, and clays of floodplain, channel, and modern river origin (Engineering-Science 1992). In recent times, the Mississippi River has reworked the upper part of the valley fill in migrating across the broad bottomlands, while spreading floodwaters deposited silt and clay along the sides of the channel and in backwater areas. The channel migration, cut-and-fill, and flooding have produced complex heterogeneous deposits.

The primary findings of the FPH CPT/ROST™ investigation (Clayton 2004) indicate the presence of an alluvial veneer of silts and clays overlying the areally extensive Main Sand. The alluvial silts and clays generally thicken in an easterly direction from Old St. Louis Road towards North Olive Street. A similar thickening occurs in a northerly direction from Hawthorne Avenue to Rand Avenue. As these alluvial deposits thicken to the north and east, three distinguishable permeable strata (EPA, Rand and North Olive) are found within these deposits. The more permeable strata exhibit significant spatial variability, ranging from sand with clay and silt, to silt with sand and clay. The units are separated by less permeable silty clays and clayey silts.

The EPA Stratum is separated from the Main Sand by a relatively thin silty clay layer less than 5 feet in thickness in the area of investigation. The intervening silty clay between these units pinches out in the northeastern portion of Hartford. Thereafter, to the southwest, the EPA Stratum and Main Sand compose one unit. The interpreted areal

extents of the EPA Stratum are presented in Figure 2-2. The EPA Stratum is in hydraulic communication with the Main Sand in those areas where the EPA Stratum merges with the Main Sand and during those times when groundwater levels are high enough.

The Rand Stratum, which is less permeable than the underlying Main Sand and EPA Stratum, is identified as sand with clay and silt to silt with sand and clay. The Rand Stratum is present over much of the northern half of Hartford (see Figure 2-3). The Rand Stratum also is in hydraulic communication with the Main Sand in those areas where the Rand Stratum merges with the Main Sand and during those times when groundwater levels are high enough. The Rand Stratum also exhibits spatial variability of geometry (i.e., it is of varying thickness and elevation throughout the area).

The North Olive Stratum was identified overlying the Rand Stratum in the FPH CPT/ROST report (Clayton 2004). This stratum is similar to the Rand Stratum and apparently consists of sand with silt and clay ranging to silt with sand and clay. The North Olive Street Stratum also exhibits spatial variability of geometry similar to the Rand Stratum. This unit, is identified beginning at a depth of approximately 10 feet bgs and varies in thickness from approximately 2 to 8 feet below North Olive Street. Water was identified within this stratum along North Olive Street. The North Olive Stratum is also in hydraulic communication with the underlying Main Sand in those areas where the North Olive Stratum merges with the Main Sand and during those times when groundwater levels are high enough. The North Olive Stratum also is laterally extensive over approximately half of northern Hartford, although it is not identified within the central portion of Hartford (see Figure 2-4).

To the south of Watkins Street, the four strata combine into one hydrostratigraphic unit, the Main Sand. However, the exact extent and continuity of relatively thin units (such as the EPA, Rand, and North Olive Strata) remain somewhat uncertain because of geologic heterogeneities related to the depositional environment of the area.

2.4 GROUNDWATER FLOW MAPPING

In 2004, data from wells in Hartford and those owned by Shell (Rand Avenue site and the Shell Tannery property) and Premcor were used to develop the groundwater flow map of the Main Sand. These additional Shell and Premcor wells are primarily located northeast and east of Hartford, respectively. Shell wells and Hartford wells were used to develop the groundwater flow map of the EPA Stratum. At present, only Shell wells were used to develop the groundwater flow map of the Rand Stratum. These maps are presented as Figures 2-5 through 2-10. Tables 2-1 through 2-3 provide the results of the monitoring well gauging for 2004.

The January and April 2004 groundwater flow maps for the Main Sand indicate the flow direction is northerly/northwesterly. This groundwater flow direction is consistent with historical interpretations provided by others. As discussed in the Investigation Plan (Clayton 2004), the natural movement of groundwater in the Hartford area has been altered by large-scale water pumping resulting in the observed flow directions. The January 2004 groundwater flow maps of both the EPA Stratum and the Rand Stratum are more limited based on the limited areal extent of these respective strata.

The January 2004 groundwater flow map (Figure 2-6) of the EPA Stratum indicates the flow direction is southwesterly. The April 2004 groundwater flow map (Figure 2-9) indicates a groundwater divide located slightly east of the intersection of East Rand Avenue and North Olive Street that trends along a northwest/southeast axis. The flow to the northeast of this axis is northerly while the flow to the southwest of the axis is southwesterly. Evidence of this hinge was not apparent in the January 2004 groundwater flow map of the EPA Stratum. The southwesterly flow direction southwest of the axis is consistent with the January 2004 groundwater flow map of the EPA Stratum. Groundwater flow direction in the EPA Stratum has been determined by others to be to the northeast the majority of the time with episodic flow reversals to the southwest. As

discussed in the FPH CPT/ROST Report (Clayton 2004), based on the variability of the flow direction in the EPA Stratum, more work, which is also proposed in that report, is needed to better evaluate this unit.

The January and April groundwater flow maps for the Rand Stratum (Figures 2-7 and 2-10) indicate the flow direction is northeasterly. The groundwater flow direction identified in the Rand Stratum is consistent with historical interpretations provided by others.

3.0 RECENT GROUNDWATER SAMPLING

3.1 DECEMBER 2003 GROUNDWATER SAMPLING RESULTS

Groundwater samples were collected in mid-December 2003 (using the low flow sampling technique) from the five sentinel monitoring wells and existing known wells (wells without FPH) within Hartford. In addition to the sentinel wells, HMW-25 through HMW-29, the following wells were sampled, HMW-1, HMW-3, HMW-4, HMW-7, HMW-21 and RW-1. Wells HMW-25 through HMW-29 are in the Main Sand. Of the six remaining wells, only one (RW-1) is in the Main Sand while well HMW-3 is in the EPA Stratum (Clayton 2004). Wells HMW-1, HMW-4, and HMW-7 are in the Rand Stratum (Clayton 2004) while well HMW-21 appears to screen multiple hydrostratigraphic units.

The samples were analyzed for the "Skinner List." Specifically, the samples were analyzed for the following parameters: volatile organic compounds (VOCs) (including methyl tertiary butyl ether [MTBE] and ethylene dibromide [EDB]) using USEPA Methods 5030/8260B; 1,4-dioxane using USEPA Method 8015 modified; semi-volatile organic compounds (SVOCs) using USEPA Methods 3510C, 8270C; polynuclear aromatic hydrocarbons using USEPA Method 3510C, 8310; metals using USEPA Methods 7470A; 3005A, 6010B; 3020A,7041; 3020A,7060A; 3020A,7421; and 3020A,7740; and cyanide using USEPA Method 9010, 9012A.

The "Skinner List" of parameters, the practical quantitation limits, and the analytical methods are presented in Table 3-1. The containers with applicable preservation requirements (if appropriate) for each parameter are presented in Table 3-2. The groundwater analytical results for December 2003 (not including the five sentinel wells) are presented in Table 3-3. The groundwater analytical results for December 2003 from the five sentinel wells are presented in Table 3-4.

3.2 APRIL 2004 GROUNDWATER SAMPLING RESULTS

Groundwater samples were collected in April 2004 (using the low flow sampling technique) from the five sentinel monitoring wells within Hartford. Table 3-4 presents the laboratory analytical results from the April 2004 sampling event.

Based on the December 2003 and the April 2004 groundwater analytical results, the sentinel wells have not been impacted by the identified FPH plume underlying the northern portion of Hartford. This evaluation is based on the absence of concentrations of petroleum hydrocarbon constituents above applicable 35 Illinois Administrative Code (IAC) Part 742, Tiered Approach to Corrective Action Objectives (TACO) Class I Groundwater Remediation Objectives (GROs), with the exception of one parameter (lead). It is also based upon the groundwater flow mapping that shows flow in the northern portion of Hartford is to the north, away from the Hartford Well Head Protection Area (WHPA) and the Hartford municipal water supply wells. The identification of occasional lead exceedances in the sentinel wells is not considered an indication of impact from the FPH plume due to the sporadic nature and location of the occurrences in light of the long-term existence of the FPH plume. Furthermore, lead is often a naturally occurring constituent in groundwater.

3.3 FEBRUARY 2004 DIRECT PUSH GROUNDWATER SAMPLING

On February 22, 2004, Clayton conducted limited direct push groundwater sampling at select locations. Fugro Geosciences, Inc. of Santa Fe Springs, California completed the direct push groundwater sampling using a CPT rig with the sampling equipment (groundwater sampler) advanced using hydraulic rams mounted inside the rig.

The groundwater samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and MTBE. Sample locations were all from the saturated zone in the

Main Sand. Samples were taken at three locations (HROST-1, 57, and 60) interpreted to be free of FPH and residual petroleum hydrocarbon. One groundwater sample was taken at a ROST location (HROST-13) interpreted to potentially have FPH present.

In general, the analytical results for the samples taken at HROST-1, 57, and 60 showed low concentrations of the analyzed constituents in the groundwater. In addition, no signs of FPH were encountered when sampling at these locations. The groundwater sample at HROST-13 contained FPH at the time of sampling, and higher amounts of analyzed constituents were detected in the analytical results. It should be recognized that the samples were not obtained from permanently installed monitoring wells intended for the collection of groundwater samples. Rather, these were solely grab samples collected from a temporary groundwater sampler. As a result, the samples were generally turbid.

Turbidity can cause biased or "false positive" results in groundwater samples and interfere with sample analysis. The effect will depend on the sorption properties of the constituent of concern (COC) and the amount of entrained colloidal-sized soil particles. Thus, the results indicating the presence of BTEX should not necessarily be considered a determination that groundwater has been impacted by the identified FPH plume. The analytical results of the groundwater samples are presented in Table 3-5.

3.4 IN-SITU HYDRAULIC CONDUCTIVITY TESTING

In-situ hydraulic conductivity tests of selected sentinel wells, specifically, HMW-25 and HMW-27 through HMW-29, were conducted on December 19, 2003. The slug test method was performed on the wells using a PVC slug of known volume. A Standard Operating Procedure (SOP) for instantaneous head aquifer testing was included in the January 7, 2004 Work Plan (Clayton 2004).

The boring logs and well construction reports provided in the January 7, 2004 Work Plan (Clayton 2004) indicate the water-bearing unit screened by the wells is unconfined as the water table in the Main Sand forms the upper boundary of the aquifer. The Main Sand, although overlain by finer-grained sediments, is unconfined at the sentinel well locations as indicated by the presence of the potentiometric surface at a level below the bottom of the overlying confining unit. The data were analyzed using the Bouwer and Rice method (Bouwer and Rice 1976), which is an industry standard for evaluating data from an unconfined aquifer.

The data obtained from the hydraulic conductivity tests was downloaded into an electronic database to allow application of regression techniques for computation of hydraulic conductivities. The data were evaluated based on the hydrogeologic conditions present (i.e., confined or unconfined). The data analysis and graphic interpretation were conducted using the Aquifer$^{WIN32®}$ software package developed by Environmental Simulations, Inc. Data sheets and Aquifer$^{WIN32®}$ graphs for individual sentinel wells are provided in Appendix A.

The average hydraulic conductivity for the Main Sand near the sentinel wells is 2.2E-02 cm/sec with a geometric mean of 2.1E-02 cm/sec. A summary of the data and the calculated hydraulic conductivities is provided in Table 3-6. Average and geometric mean hydraulic conductivity values for the Main Sand are listed in Table 3-7.

4.0 DISSOLVED PHASE GROUNDWATER INVESTIGATION WORK PLAN

A determination of the status of the dissolved phase petroleum hydrocarbon plume is a prerequisite to enhancing the Conceptual Site Model (CSM) and designing an effective remedial approach. As discussed in the January 7, 2004 Work Plan, following the completion of the FPH investigation, the process of conducting additional groundwater investigations to define the extent of dissolved phase petroleum hydrocarbons will be initiated. This determination will include all identified groundwater bearing permeable strata. The groundwater near the municipal water supply wells will also be sampled at this time. The following sections describe the approach and techniques that will be employed to conduct this investigation. The results from this investigation will be used to guide efforts to define the extent of dissolved phase impacts to the groundwater.

4.1 MONITORING WELL GROUNDWATER SAMPLING

One round of groundwater samples will be collected (using the low flow sampling technique) from selected monitoring wells (wells without FPH) within Hartford (including new wells installed as part of the FPH plume delineation) to determine the status of dissolved phase impacted groundwater in identified permeable strata. The wells to be sampled are yet to be fully determined dependent upon the results of the additional FPH field investigation to confirm and supplement the CPT/ROST investigation and dependent upon conditions at the time of sampling. However, it is anticipated that the well list will include the previously sampled wells HMW-1, HMW-3, HMW-4, HMW-7, HMW-21, HMW-25 through HMW-29, and RW-1, which are shown in Figure 2-1. The proposed additional FPH field investigation well locations are presented in Figure 4-1.

The samples will be analyzed for the Skinner list of parameters presented in Table 3-1, including VOCs, including MTBE, polynuclear aromatic hydrocarbons (PNAs), and metals.

Additional groundwater gauging, monitoring, sampling, and decontamination details are provided in SOPs 220 and 415 contained in the January 7, 2004 Work Plan. These SOPs may be modified based on field conditions.

4.2 DIRECT PUSH GROUNDWATER SAMPLING IN VICINITY OF HARTFORD MUNICIPAL WATER SUPPLY WELLS

As has been presented in previous reports (Clayton 2004), the FPH plume underlying the northern portion of Hartford has not impacted the Hartford WHPA surrounding the municipal water supply wells located in the west central portion of town (Figure 4-2). Furthermore, there have been no known releases identified in association with petroleum pipelines located to the west and south of the Hartford Municipal Water Supply Wells. Finally, a review of the VOC history (provided by the Illinois EPA) for the Hartford municipal water supply wells (March 1990 to March 2004) has not revealed the presence of typical petroleum indicator parameters (e.g., BTEX). During this 14-year period, benzene was detected one time in May 1994 at a concentration of 0.7 ug/L. There have been periodic detections of some chlorinated compounds (primarily monochlorobenzene and 1,2-dichlorobenzene) at low ug/L concentrations over this 14-year period. Monochlorobenzene is used in dry cleaning and manufacturing of pesticides and dyestuffs. 1,2-dichlorobenzene is used primarily as an industrial solvent and degreasing agent but may also be used (ortho form) as an additive to motor oil (National Institute of Health, 2004).

Due to questions raised during the USEPA's March 25, 2004, public meeting, the Agencies have requested further evaluation of the groundwater near the Hartford Municipal Water Supply Wells. This section has been prepared to address the Agencies' request.

This evaluation will consist of an investigation of groundwater conditions within the WHPA proximate to the Hartford municipal water supply wells. Three locations to the southeast have been identified for groundwater sampling. The proposed groundwater sampling locations near the Hartford Municipal Water Supply Wells are presented in Figure 4-2.

The Hartford municipal water wells investigation will consist of a series of direct push groundwater samples. The direct push groundwater samples will be collected from the Main Sand. Samples will be collected either using a discrete groundwater sampler and a CPT rig or by placement of a temporary well installed by a Geoprobe®. All borings will be continuously sampled or analyzed to determine the soil stratigraphy using a continuous sampling device (e.g., a Macrotube) or a piezocone probe, which contains gauges that monitor tip resistance, friction ratio, and pore pressure. Soil samples, if obtained, will be described and classified according to the Unified Soil Classification System. Visual, photoionization detector (PID), and olfactory observations will be noted. If CPT technology is implemented, soil stratigraphy will be classified using *Campanella and Robertson's Simplified Soil Behavior Chart* (Robertson and Campanella 1983). Additional drilling and sampling details are provided in SOP 120 contained in the Quality Assurance Project Plan (QAPP). This SOP may be modified based on field conditions.

The groundwater sample will be collected with an appropriate sampling device lowered inside the sampler or the temporary well. Decontamination activities will be conducted adjacent to the boring location, and no soil cuttings will be produced during the sampling due to the nature of the proposed method. The boring locations will be abandoned by sealing with bentonite upon completion.

The groundwater samples will be analyzed for a subset of the Skinner list of parameters presented in Table 3-1, specifically, VOCs and SVOCs.

5.0 SCHEDULE

There are two main activities associated with the dissolved phase groundwater investigation: 1) collecting groundwater samples from existing monitoring wells that do not contain free phase hydrocarbon and newly installed monitoring wells (that do not contain free phase hydrocarbon) that will be installed as part of the free phase hydrocarbon investigation, and 2) using the direct push method to collect groundwater samples in the area of the municipal water supply wells.

The groundwater sampling of monitoring wells will not be initiated until after all the new monitoring wells to be installed as part of the free phase hydrocarbon investigation have been installed and developed. The schedule for this activity is as follows:

Activity	Days After FPH Wells Installed
Groundwater sampling from Hartford wells without FPH (including new FPH plume delineation wells)	15 calendar days
Groundwater analysis (Skinner List) from Hartford wells without FPH (including new FPH plume delineation wells)	30 calendar days

The groundwater sampling in the area of the municipal water supply wells can be initiated upon approval by the Agencies of the activities outlined in Section 4.0. The schedule for this activity is as follows:

Activity	Days After Receiving Approval
Preparation and clear utilities.	20 calendar days
Complete direct push groundwater sampling activities in vicinity of Hartford municipal wells.	25 calendar days
Groundwater analysis (Skinner List) of direct push groundwater samples in vicinity of Hartford municipal wells.	40 calendar days

The actual start date of the work for both activities will be dependent on weather conditions, and the actual length of time to complete the work will be dependent not only on weather conditions but also on the findings in the field.

The data collected from both activities will be evaluated and presented in the Dissolved Phase Investigation Report that is due to the Agencies by December 24, 2004.

6.0 REFERENCES

Clayton Group Services, Inc., January 7, 2004. *Investigation Plan to Define the Extent of Free Phase and Dissolved Phase Hydrocarbons in the Village of Hartford, Illinois.*

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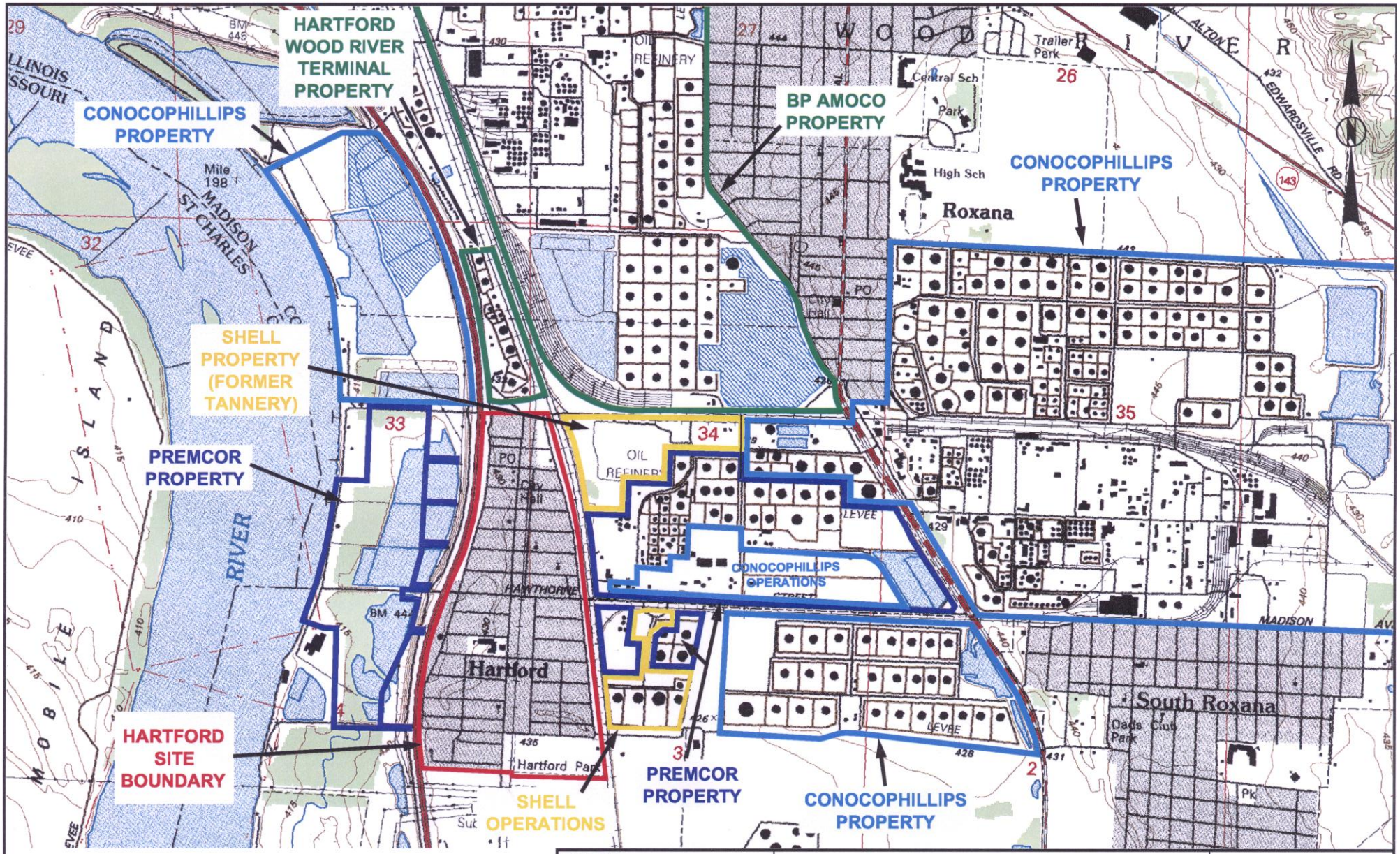
FIGURES



** NOT TO SCALE **

SOURCE:
USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP
(WOOD RIVER, ILL.–MO. – rev.1994)

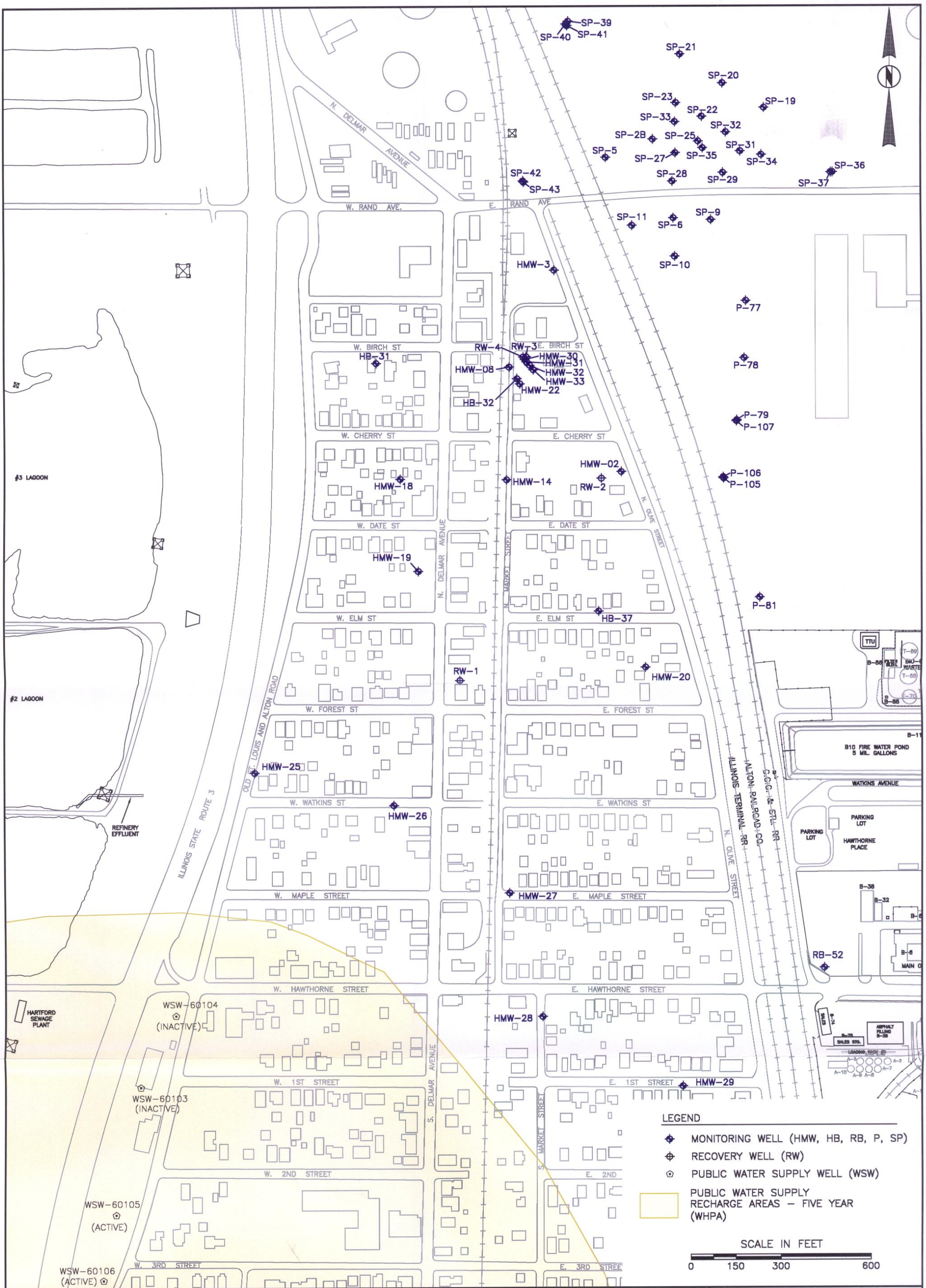
CHK BY	
DWN BY	BCP
DATE	6–24–04
SCALE	AS SHOWN
CAD NO.	0309512001B
PRJ NO.	15–03095.12

VILLAGE OF HARTFORD, IL AND SURROUNDING AREA MAP

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton® GROUP SERVICES

FIGURE
1 – 1



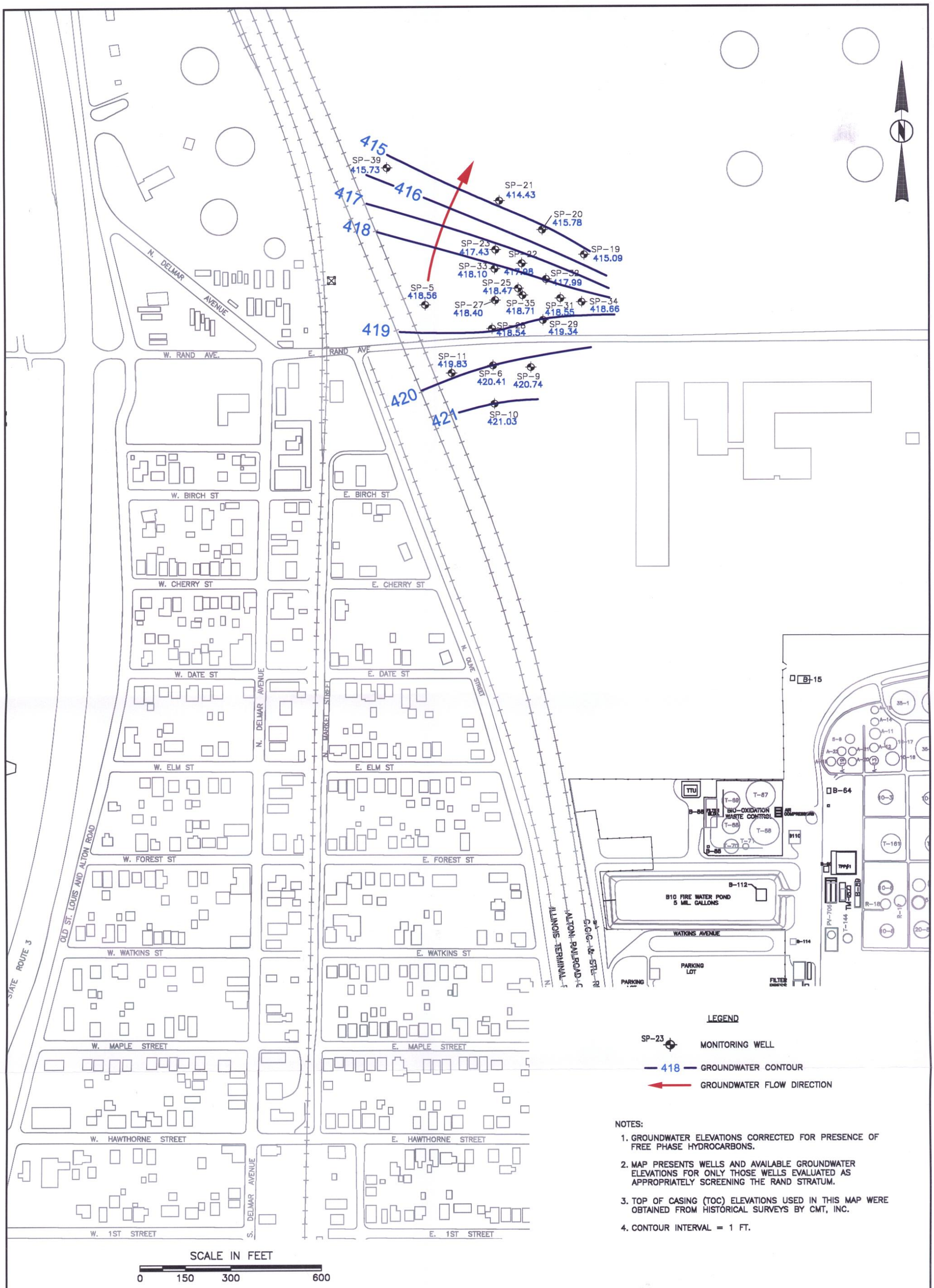
CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007B
PRJ NO.	15-03095

NORTH HARTFORD SITE MAP
VILLAGE OF HARTFORD, IL

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 2-1



NOTES:

1. GROUNDWATER ELEVATIONS CORRECTED FOR PRESENCE OF FREE PHASE HYDROCARBONS.
2. MAP PRESENTS WELLS AND AVAILABLE GROUNDWATER ELEVATIONS FOR ONLY THOSE WELLS EVALUATED AS APPROPRIATELY SCREENING THE RAND STRATUM.
3. TOP OF CASING (TOC) ELEVATIONS USED IN THIS MAP WERE OBTAINED FROM HISTORICAL SURVEYS BY CMT, INC.
4. CONTOUR INTERVAL = 1 FT.

CHECK BY	KDC
DRAWN BY	BCP
DATE	4-29-04
SCALE	AS SHOWN
CAD NO.	0309514007g06
PRJ NO.	15-03095

GROUNDWATER FLOW MAP
APRIL 20-22, 2004 – RAND STRATUM

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 2-10

CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007C
PRJ NO.	15-03095

INTERPRETATION OF THE EXTENTS OF THE EPA STRATUM

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 2-2

CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007D
PRJ NO.	15-03095

INTERPRETATION OF THE
EXTENTS OF THE RAND STRATUM

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton®
GROUP SERVICES

FIGURE 2-3

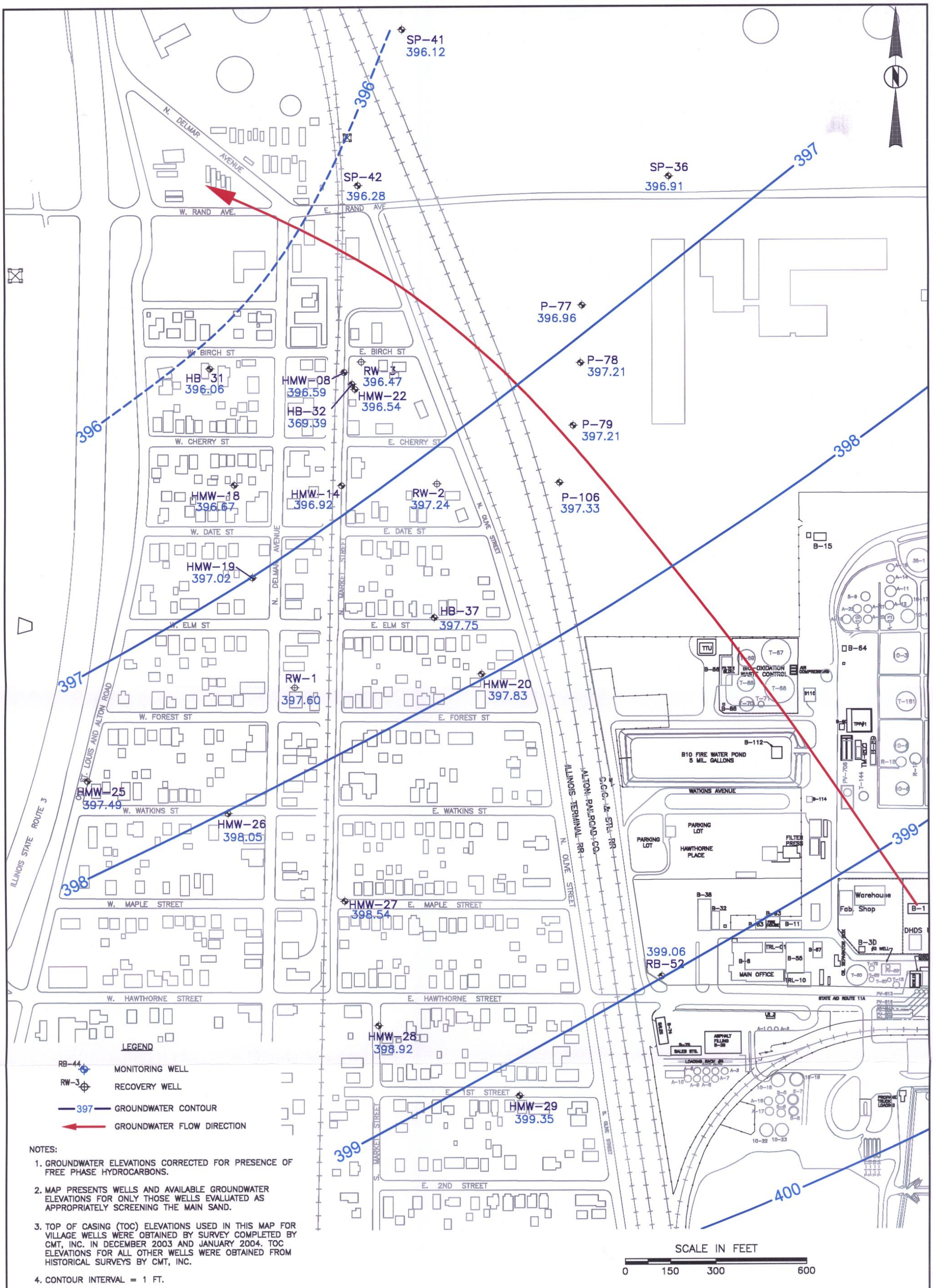
CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007E
PRJ NO.	15-03095

INTERPRETATION OF THE
EXTENTS OF THE N. OLIVE STRATUM

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton® GROUP SERVICES

FIGURE 2-4



NOTES:

1. GROUNDWATER ELEVATIONS CORRECTED FOR PRESENCE OF FREE PHASE HYDROCARBONS.
2. MAP PRESENTS WELLS AND AVAILABLE GROUNDWATER ELEVATIONS FOR ONLY THOSE WELLS EVALUATED AS APPROPRIATELY SCREENING THE MAIN SAND.
3. TOP OF CASING (TOC) ELEVATIONS USED IN THIS MAP FOR VILLAGE WELLS WERE OBTAINED BY SURVEY COMPLETED BY CMT, INC. IN DECEMBER 2003 AND JANUARY 2004. TOC ELEVATIONS FOR ALL OTHER WELLS WERE OBTAINED FROM HISTORICAL SURVEYS BY CMT, INC.
4. CONTOUR INTERVAL = 1 FT.

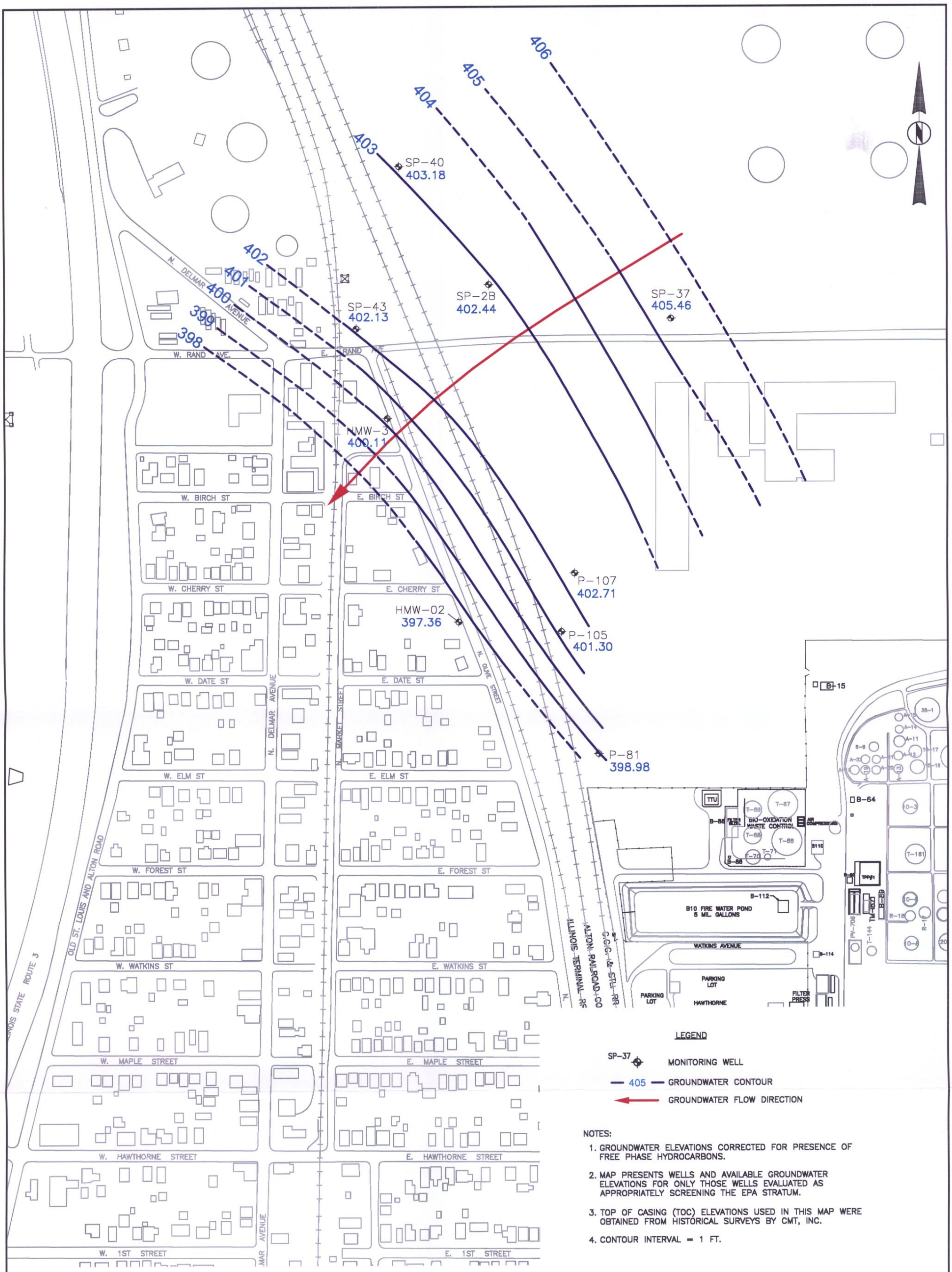
CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007g01
PRJ NO.	15-03095

GROUNDWATER FLOW MAP
JANUARY 26-28, 2004
MAIN SAND

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 2-5



NOTES:

1. GROUNDWATER ELEVATIONS CORRECTED FOR PRESENCE OF FREE PHASE HYDROCARBONS.
2. MAP PRESENTS WELLS AND AVAILABLE GROUNDWATER ELEVATIONS FOR ONLY THOSE WELLS EVALUATED AS APPROPRIATELY SCREENING THE EPA STRATUM.
3. TOP OF CASING (TOC) ELEVATIONS USED IN THIS MAP WERE OBTAINED FROM HISTORICAL SURVEYS BY CMT, INC.
4. CONTOUR INTERVAL = 1 FT.

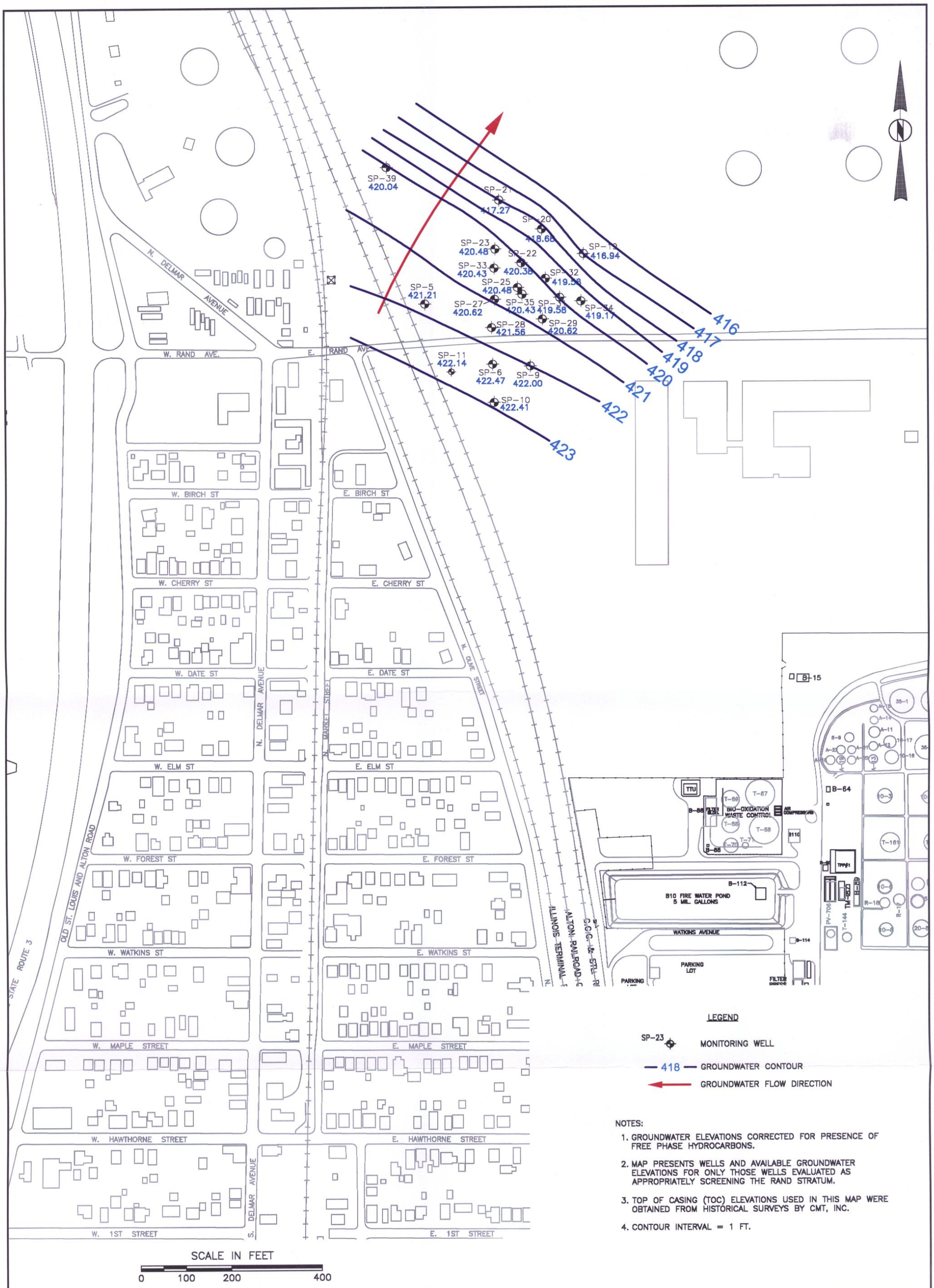
CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007g02
PRJ NO.	15-03095

GROUNDWATER FLOW MAP
JANUARY 26-28, 2004
EPA STRATUM

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 2-6



LEGEND

SP-23 MONITORING WELL

418 GROUNDWATER CONTOUR

GROUNDWATER FLOW DIRECTION

NOTES:

1. GROUNDWATER ELEVATIONS CORRECTED FOR PRESENCE OF FREE PHASE HYDROCARBONS.
2. MAP PRESENTS WELLS AND AVAILABLE GROUNDWATER ELEVATIONS FOR ONLY THOSE WELLS EVALUATED AS APPROPRIATELY SCREENING THE RAND STRATUM.
3. TOP OF CASING (TOC) ELEVATIONS USED IN THIS MAP WERE OBTAINED FROM HISTORICAL SURVEYS BY CMT, INC.
4. CONTOUR INTERVAL = 1 FT.

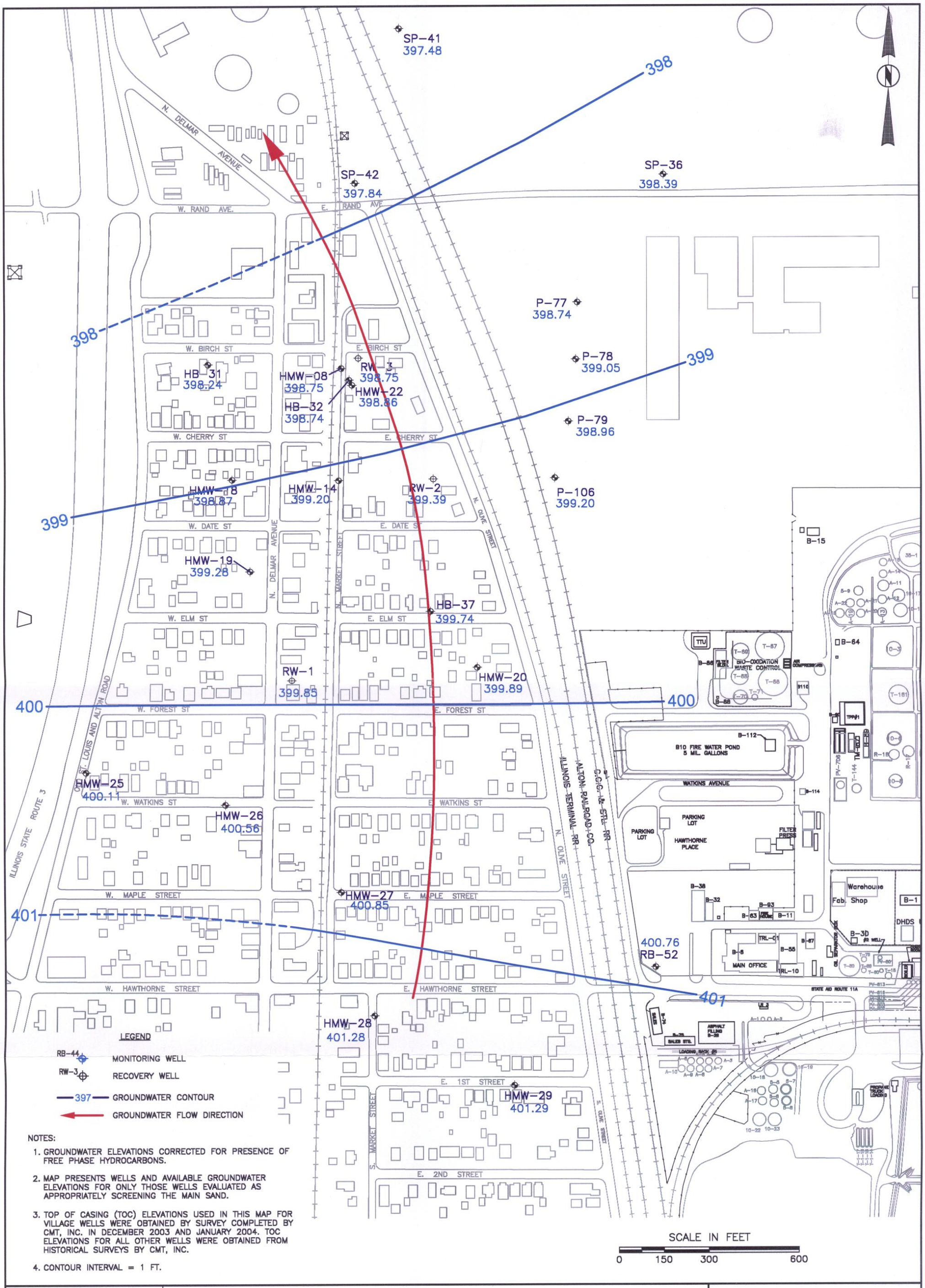
CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007g03
PRJ NO.	15-03095

GROUNDWATER FLOW MAP
JANUARY 26-28, 2004
RAND STRATUM

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 2-7



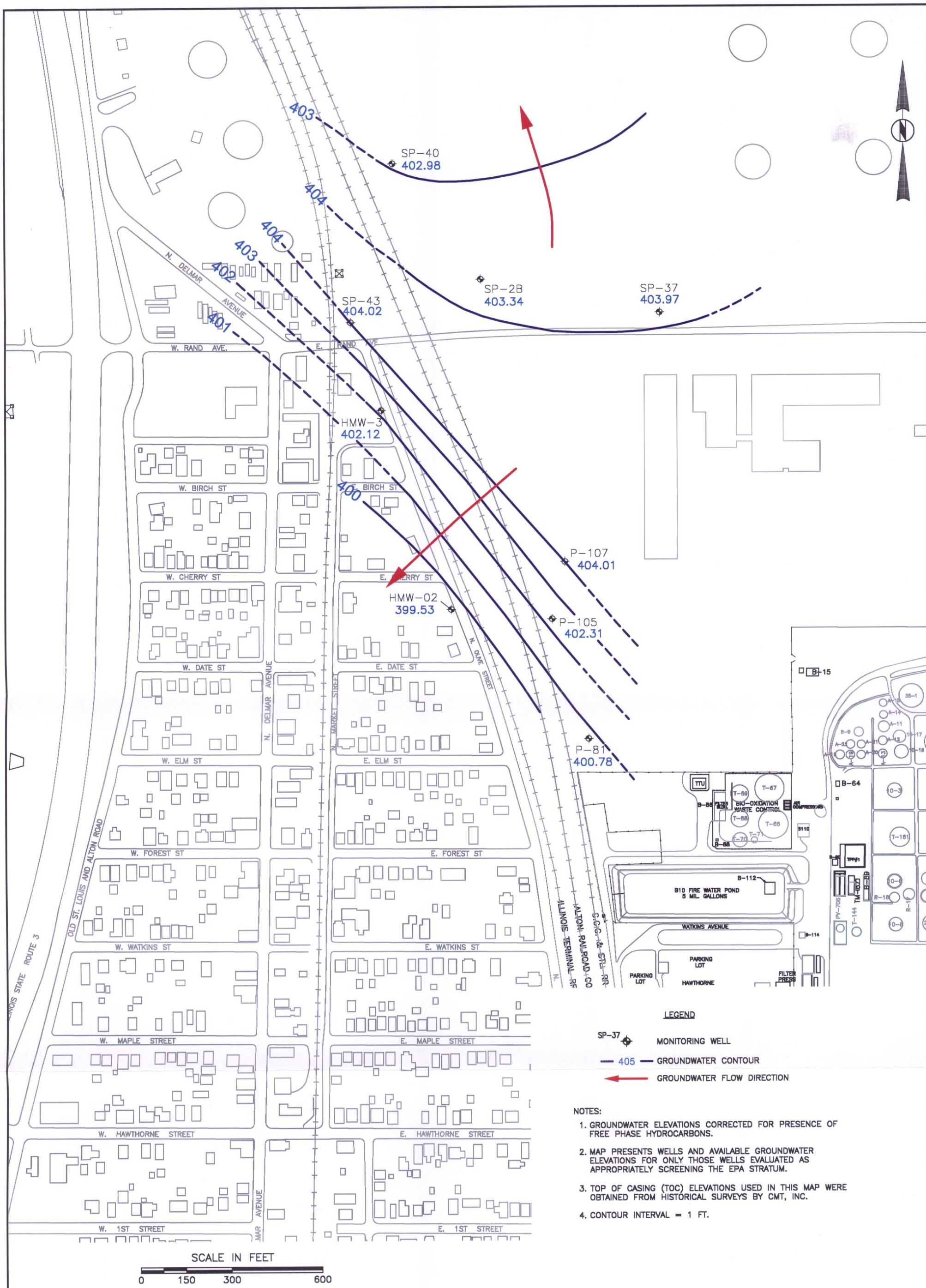
CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007g04
PRJ NO.	15-03095

GROUNDWATER FLOW MAP
APRIL 20-22, 2004
MAIN SAND

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 2-8



NOTES:

1. GROUNDWATER ELEVATIONS CORRECTED FOR PRESENCE OF FREE PHASE HYDROCARBONS.
2. MAP PRESENTS WELLS AND AVAILABLE GROUNDWATER ELEVATIONS FOR ONLY THOSE WELLS EVALUATED AS APPROPRIATELY SCREENING THE EPA STRATUM.
3. TOP OF CASING (TOC) ELEVATIONS USED IN THIS MAP WERE OBTAINED FROM HISTORICAL SURVEYS BY CMT, INC.
4. CONTOUR INTERVAL = 1 FT.

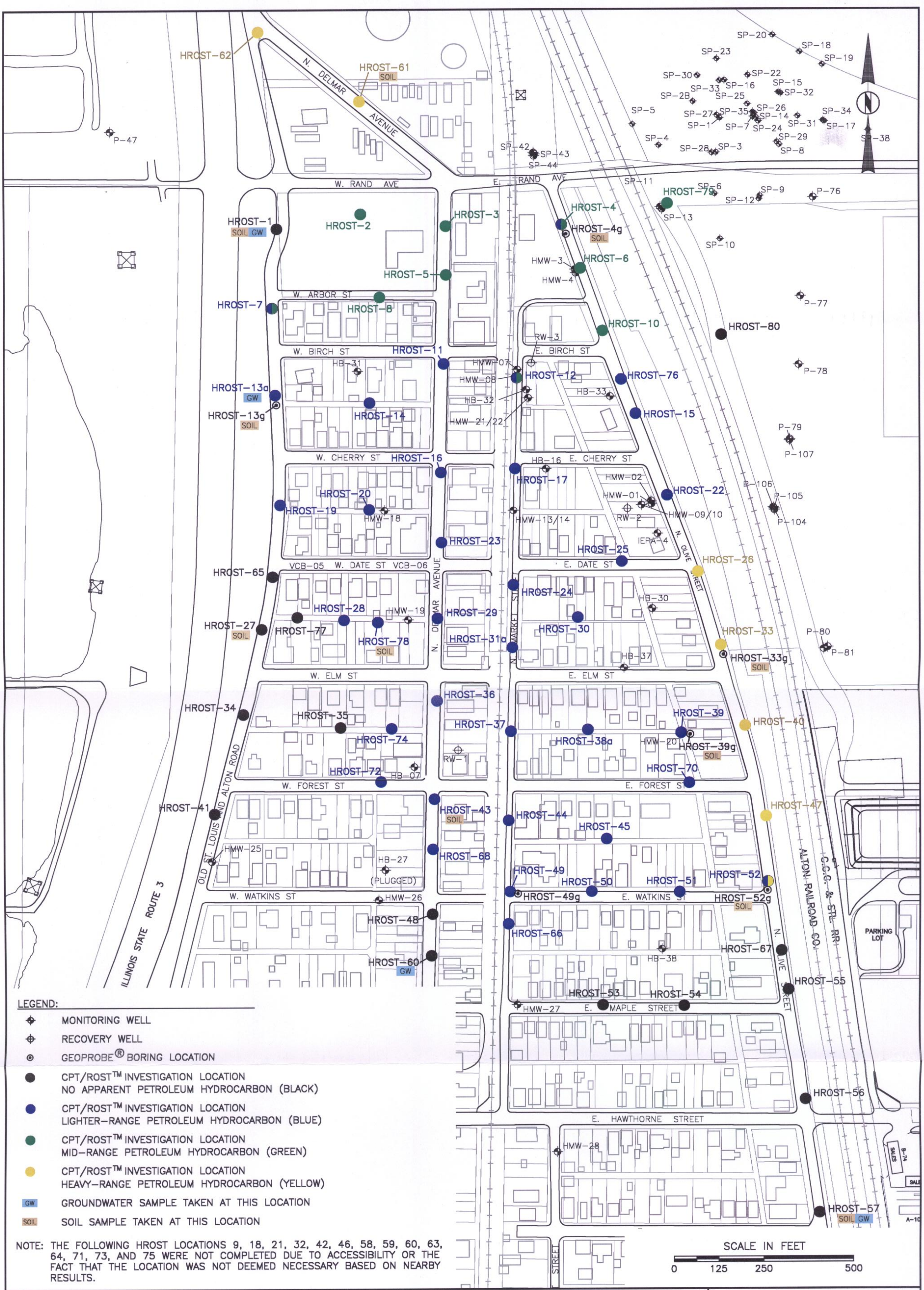
CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007g05
PRJ NO.	15-03095

GROUNDWATER FLOW MAP
APRIL 20-22, 2004
EPA STRATUM

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 2-9



LEGEND:

- MONITORING WELL
- RECOVERY WELL
- GEOPROBE® BORING LOCATION
- CPT/ROST™ INVESTIGATION LOCATION NO APPARENT PETROLEUM HYDROCARBON (BLACK)
- CPT/ROST™ INVESTIGATION LOCATION LIGHTER-RANGE PETROLEUM HYDROCARBON (BLUE)
- CPT/ROST™ INVESTIGATION LOCATION MID-RANGE PETROLEUM HYDROCARBON (GREEN)
- CPT/ROST™ INVESTIGATION LOCATION HEAVY-RANGE PETROLEUM HYDROCARBON (YELLOW)
- GW GROUNDWATER SAMPLE TAKEN AT THIS LOCATION
- SOIL SOIL SAMPLE TAKEN AT THIS LOCATION

NOTE: THE FOLLOWING HROST LOCATIONS 9, 18, 21, 32, 42, 46, 58, 59, 60, 63, 64, 71, 73, AND 75 WERE NOT COMPLETED DUE TO ACCESSIBILITY OR THE FACT THAT THE LOCATION WAS NOT DEEMED NECESSARY BASED ON NEARBY RESULTS.

CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007H
PRJ NO.	15-03095

CONE PENETRATION/RAPID OPTICAL SCREENING TOOL (CPT/ROST™)
BORING LOCATIONS
VILLAGE OF HARTFORD, ILLINOIS

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton® GROUP SERVICES

FIGURE 3-1

INTERPRETED EXTENT OF FREE PHASE HYDROCARBON

LEGEND:

- PROPOSED MONITORING WELL LOCATION
- MONITORING WELL
- RECOVERY WELL
- CPT/ROST™ INVESTIGATION LOCATION
- INTERPRETED EXTENT OF FREE PHASE HYDROCARBON

SCALE IN FEET

0 125 250 500

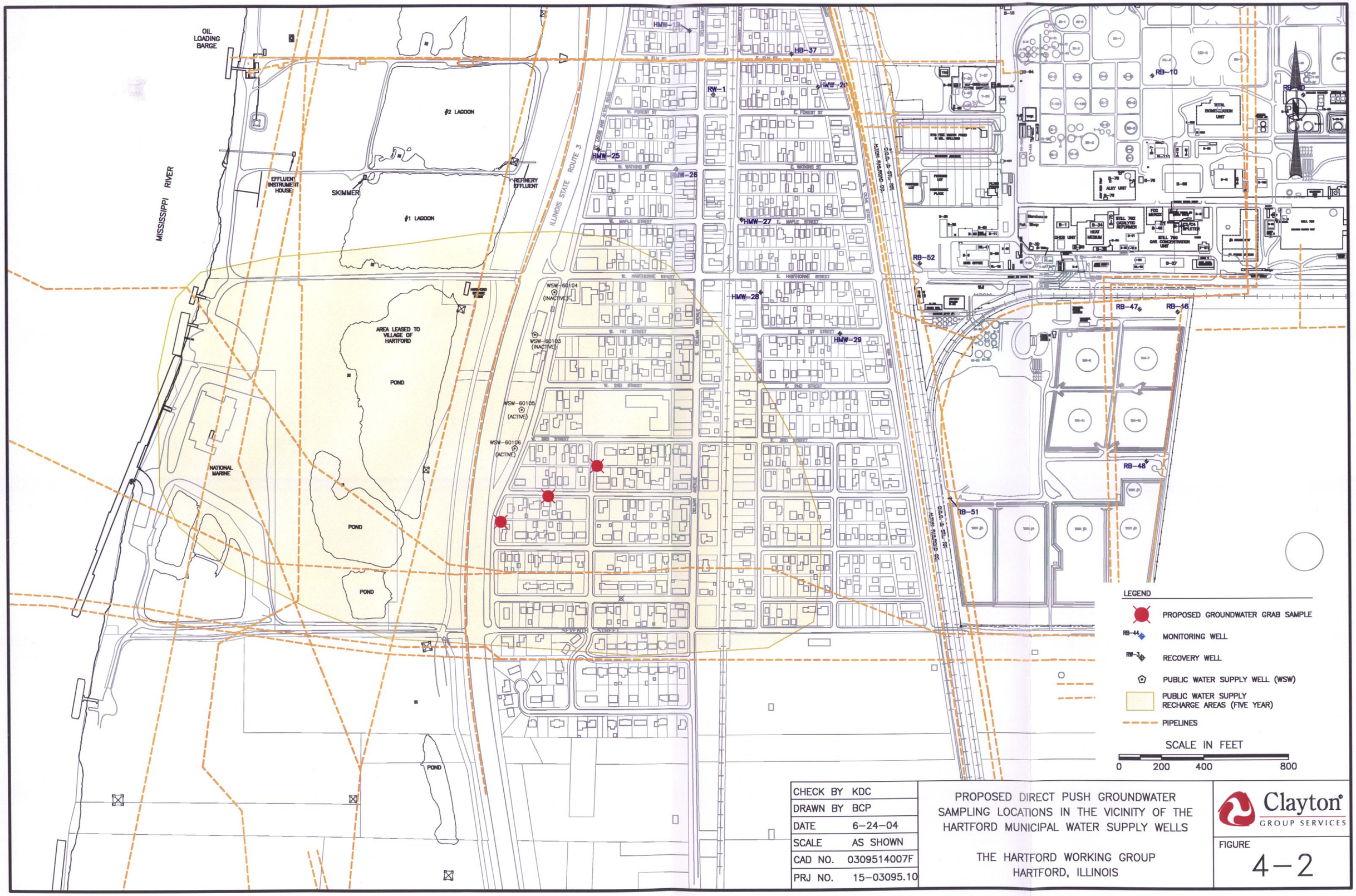
CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007A
PRJ NO.	15-03095

PROPOSED SOIL BORING / MONITORING WELL LOCATIONS MAP
VILLAGE OF HARTFORD, IL

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 4-1



CHECK BY	KDC
DRAWN BY	BCP
DATE	6-24-04
SCALE	AS SHOWN
CAD NO.	0309514007F
PRJ NO.	15-03095.10

PROPOSED DIRECT PUSH GROUNDWATER SAMPLING LOCATIONS IN THE VICINITY OF THE HARTFORD MUNICIPAL WATER SUPPLY WELLS

THE HARTFORD WORKING GROUP
HARTFORD, ILLINOIS

Clayton GROUP SERVICES

FIGURE 4-2

TABLES

TABLES

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
IEPA-4	02/09/04	430.35	32.74	34.12	397.61	396.23	1.38	397.29
	03/15/04	430.35	31.58	32.42	398.77	397.93	0.84	398.58
	04/20/04	430.35	30.35	31.71	400	398.64	1.36	399.69
	05/27/04	430.35	30.50	31.83	399.85	398.52	1.33	399.54
	06/03/04	430.35	29.03	30.38	401.32	399.97	1.35	401.01
	06/10/04	430.35	27.66	29.38	402.69	400.97	1.72	402.29
HB-07[2]	01/27/04	432.32	--	--	--	--	--	--
	03/15/04	432.32	--	--	--	--	--	--
	06/10/04	432.32	--	--	--	--	--	--
HB-16[3]	02/18/04	431.42	--	--	--	--	--	--
	04/20/04	431.42	32.15	32.86	399.27	398.56	0.71	399.11
	06/03/04	431.42	29.76	30.43	401.66	400.99	0.67	401.51
	06/10/04	431.42	--	--	--	--	--	--
HB-27[2]	02/18/04	425.83	--	--	--	--	--	--
HB-30	02/18/04	431.08	33.75	34.83	397.33	396.25	1.08	397.08
	04/20/04	431.08	31.03	32.25	400.05	398.83	1.22	399.77
	05/27/04	431.08	30.73	31.50	400.35	399.58	0.77	400.17
	06/03/04	431.08	29.53	30.79	401.55	400.29	1.26	401.26
	06/10/04	431.08	--	--	--	--	--	--
HB-31[3]	01/27/04	431.49	NA	35.43	NA	396.06	0	396.06
	04/21/04	431.49	NA	33.25	NA	398.24	0	398.24
	05/27/04	431.49	NA	32.14	NA	399.35	0	399.35
	06/03/04	431.49	NA	29.95	NA	401.54	0	401.54
	06/10/04	431.49	--	--	--	--	--	--
HB-32[4]	01/27/04	433.33	NA	36.94	NA	396.39	0	396.39
	02/17/04	433.33	NA	37.62	NA	395.71	0	395.71
	02/18/04	433.33	NA	37.58	NA	395.75	0	395.75
	02/19/04	433.33	NA	37.42	NA	395.91	0	395.91
	03/05/04	433.33	NA	36.94	NA	396.39	0	396.39
	03/09/04	433.33	NA	35.97	NA	397.36	0	397.36
	03/15/04	433.33	NA	35.11	NA	398.22	0	398.22
	04/20/04	433.33	NA	34.59	NA	398.74	0	398.74
	05/20/04	433.33	NA	34.97	NA	398.36	0	398.36
	05/20/04	433.33	NA	34.97	NA	398.36	0	398.36

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HB-32[4]	05/20/04	433.33	NA	34.92	NA	398.41	0	398.41
	05/21/04	433.33	NA	34.84	NA	398.49	0	398.49
	05/21/04	433.33	NA	34.76	NA	398.57	0	398.57
	05/24/04	433.33	NA	34.47	NA	398.86	0	398.86
	05/24/04	433.33	NA	24.29	NA	409.04	0	409.04
	05/24/04	433.33	NA	29.72	NA	403.61	0	403.61
	05/25/04	433.33	NA	34.29	NA	399.04	0	399.04
	05/25/04	433.33	NA	34.22	NA	399.11	0	399.11
	05/26/04	433.33	NA	34.16	NA	399.17	0	399.17
	05/26/04	433.33	NA	34.08	NA	399.25	0	399.25
	05/27/04	433.33	NA	33.77	NA	399.56	0	399.56
	05/27/04	433.33	NA	33.58	NA	399.75	0	399.75
	05/28/04	433.33	NA	33.46	NA	399.87	0	399.87
	06/01/04	433.33	NA	32.23	NA	401.10	0	401.10
	06/02/04	433.33	NA	32.28	NA	401.05	0	401.05
	06/02/04	433.33	NA	32.23	NA	401.10	0	401.10
	06/03/04	433.33	NA	32.20	NA	401.13	0	401.13
	06/03/04	433.33	NA	32.00	NA	401.33	0	401.33
	06/04/04	433.33	NA	31.80	NA	401.53	0	401.53
	06/10/04	433.33	NA	31.06	NA	402.27	0	402.27
HB-33[4]	02/09/04	430.23	NA	31.79	NA	398.44	0	398.44
	03/15/04	430.23	NA	30.46	NA	399.77	0	399.77
	04/21/04	430.23	NA	29.48	NA	400.75	0	400.75
	05/20/04	430.23	NA	30.43	NA	399.80	0	399.80
	05/20/04	430.23	NA	31.36	NA	398.87	0	398.87
	05/20/04	430.23	NA	30.43	NA	399.80	0	399.80
	05/21/04	430.23	NA	30.33	NA	399.90	0	399.90
	05/21/04	430.23	NA	30.24	NA	399.99	0	399.99
	05/24/04	430.23	NA	29.72	NA	400.51	0	400.51
	05/25/04	430.23	NA	29.54	NA	400.69	0	400.69
	05/25/04	430.23	NA	29.56	NA	400.67	0	400.67
	05/26/04	430.23	NA	29.63	NA	400.60	0	400.60
	05/27/04	430.23	NA	29.03	NA	401.20	0	401.20
	05/27/04	430.23	NA	28.82	NA	401.41	0	401.41
	05/28/04	430.23	NA	28.57	NA	401.66	0	401.66

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HB-33[4]	06/01/04	430.23	NA	28.37	NA	401.86	0	401.86
	06/02/04	430.23	NA	28.52	NA	401.71	0	401.71
	06/02/04	430.23	NA	28.53	NA	401.70	0	401.70
	06/03/04	430.23	NA	28.56	NA	401.67	0	401.67
	06/03/04	430.23	NA	28.41	NA	401.82	0	401.82
	06/10/04	430.23	NA	26.77	NA	403.46	0	403.46
HB-37	01/27/04	431.77	33.94	34.27	397.83	397.50	0.33	397.75
	03/15/04	431.77	33.00	33.01	398.77	398.76	0.01	398.77
	04/21/04	431.77	NA	32.03	NA	399.74	0	399.74
	05/27/04	431.77	NA	31.65	NA	400.12	0	400.12
	06/03/04	431.77	NA	30.33	NA	401.44	0	401.44
	06/10/04	431.77	29.11	29.12	402.66	402.65	0.01	402.66
HB-38	02/18/04	429.92	NA	32.11	NA	397.81	0	397.81
	03/15/04	429.92	NA	30.44	NA	399.48	0	399.48
	04/21/04	429.92	NA	29.36	NA	400.56	0	400.56
	05/27/04	429.92	NA	29.09	NA	400.83	0	400.83
	06/10/04	429.92	--	--	--	--	--	--
HMW-01	01/27/04	429.97	NA	19.78	NA	410.19	0	410.19
	02/03/04	429.97	NA	20.10	NA	409.87	0	409.87
	02/16/04	429.97	NA	20.07	NA	409.90	0	409.90
	02/17/04	429.97	--	--	--	--	--	--
	02/19/04	429.97	NA	20.02	NA	409.95	0	409.95
	02/24/04	429.97	NA	20.31	NA	409.66	0	409.66
	03/05/04	429.97	NA	19.95	NA	410.02	0	410.02
	03/15/04	429.97	NA	19.15	NA	410.82	0	410.82
	04/20/04	429.97	NA	19.50	NA	410.47	0	410.47
	05/27/04	429.97	NA	16.21	NA	413.76	0	413.76
	05/03/04	429.97	NA	17.55	NA	412.42	0	412.42
	06/10/04	429.97	NA	18.12	NA	411.85	0	411.85
HMW-02	01/27/04	429.65	32.11	32.88	397.54	396.77	0.77	397.36
	02/03/04	429.65	32.30	33.28	397.35	396.37	0.98	397.12
	02/16/04	429.65	32.51	34.11	397.14	395.54	1.6	396.77
	02/17/04	429.65	32.56	34.14	397.09	395.51	1.58	396.73
	02/18/04	429.65	32.51	34.15	397.14	395.50	1.64	396.76
	02/19/04	429.65	32.41	34.07	397.24	395.58	1.66	396.86

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-02	02/24/04	429.65	32.57	34.26	397.08	395.39	1.69	396.69
	02/27/04	429.65	32.48	33.99	397.17	395.66	1.51	396.82
	03/01/04	429.65	32.34	33.38	397.31	396.27	1.04	397.07
	03/02/04	429.65	32.48	33.70	397.17	395.95	1.22	396.89
	03/03/04	429.65	32.48	33.75	397.17	395.90	1.27	396.88
	03/04/04	429.65	32.23	33.31	397.42	396.34	1.08	397.17
	03/05/04	429.65	32.35	33.19	397.3	396.46	0.84	397.11
	03/08/04	429.65	31.98	32.52	397.67	397.13	0.54	397.55
	03/09/04	429.65	31.90	32.45	397.75	397.20	0.55	397.62
	03/15/04	429.65	31.03	31.58	398.62	398.07	0.55	398.49
	03/16/04	429.65	30.91	31.46	398.74	398.19	0.55	398.61
	03/17/04	429.65	30.88	31.42	398.77	398.23	0.54	398.65
	03/18/04	429.65	30.88	31.44	398.77	398.21	0.56	398.64
	03/19/04	429.65	30.48	31.50	399.17	398.15	1.02	398.94
	03/23/04	429.65	30.80	31.31	398.85	398.34	0.51	398.73
	03/24/04	429.65	30.77	31.32	398.88	398.33	0.55	398.75
	03/30/04	429.65	30.55	31.10	399.1	398.55	0.55	398.97
	03/31/04	429.65	30.47	31.01	399.18	398.64	0.54	399.06
	04/01/04	429.65	30.29	30.91	399.36	398.74	0.62	399.22
	04/20/04	429.65	29.96	30.65	399.69	399.00	0.69	399.53
	05/27/04	429.65	29.54	30.01	400.11	399.64	0.47	400.00
	06/03/04	429.65	28.27	28.73	401.38	400.92	0.46	401.27
	06/10/04	429.65	26.52	27.54	403.13	402.11	1.02	402.90
HMW-03	01/27/04	428.72	NA	28.61	NA	400.11	0	400.11
	03/09/04	428.72	NA	29.43	NA	399.29	0	399.29
	03/15/04	428.72	NA	28.03	NA	400.69	0	400.69
	04/20/04	428.72	NA	26.60	NA	402.12	0	402.12
	05/27/04	428.72	--	--	--	--	--	--
	06/03/04	428.72	NA	24.98	NA	403.74	0	403.74
	06/10/04	428.72	NA	23.68	NA	405.04	0	405.04
HMW-04	01/27/04	428.96	10.93	10.94	418.03	418.02	0.01	418.03
	03/09/04	428.96	NA	11.20	NA	417.76	0	417.76
	03/15/04	428.96	NA	11.00	NA	417.96	0	417.96
	04/20/04	428.96	NA	12.01	NA	416.95	0	416.95
	05/27/04	428.96	--	--	--	--	--	--

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-04	06/03/04	428.96	NA	7.57	NA	421.39	0	421.39
	06/10/04	428.96	NA	8.15	NA	420.81	0	420.81
HMW-07[4]	01/27/04	429.12	NA	24.76	NA	404.36	0	404.36
	02/17/04	429.12	NA	24.94	NA	404.18	0	404.18
	02/19/04	429.12	NA	24.86	NA	404.26	0	404.26
	03/15/04	429.12	NA	24.68	NA	404.44	0	404.44
	04/20/04	429.12	NA	24.49	NA	404.63	0	404.63
	05/27/04	429.12	NA	24.01	NA	405.11	0	405.11
	06/03/04	429.12	NA	23.53	NA	405.59	0	405.59
	06/10/04	429.12	NA	23.18	NA	405.94	0	405.94
HMW-08[4]	01/27/04	429.74	32.85	34.15	396.89	395.59	1.3	396.59
	02/19/04	429.74	33.21	35.71	396.53	394.03	2.5	395.96
	03/04/04	429.74	32.85	34.41	396.89	395.33	1.56	396.53
	03/05/04	429.74	33.01	34.30	396.73	395.44	1.29	396.43
	03/08/04	429.74	32.20	33.27	397.54	396.47	1.07	397.29
	03/09/04	429.74	32.10	33.01	397.64	396.73	0.91	397.43
	03/15/04	429.74	31.12	32.72	398.62	397.02	1.6	398.25
	04/20/04	429.74	30.43	32.86	399.31	396.88	2.43	398.75
	05/20/04	429.74	30.93	32.64	398.81	397.10	1.71	398.42
	05/20/04	429.74	30.90	32.62	398.84	397.12	1.72	398.44
	05/20/04	429.74	30.84	32.66	398.90	397.08	1.82	398.48
	05/20/04	429.74	30.84	32.65	398.90	397.09	1.81	398.48
	05/21/04	429.74	30.79	32.53	398.95	397.21	1.74	398.55
	05/21/04	429.74	30.75	32.49	398.99	397.25	1.74	398.59
	05/21/04	429.74	30.74	32.49	399.00	397.25	1.75	398.60
	05/21/04	429.74	30.67	32.54	399.07	397.20	1.87	398.64
	05/24/04	429.74	30.29	32.40	399.45	397.34	2.11	398.96
	05/24/04	429.74	30.19	32.30	399.55	397.44	2.11	399.06
	05/24/04	429.74	30.13	32.23	399.61	397.51	2.1	399.13
	05/25/04	429.74	30.18	32.29	399.56	397.45	2.11	399.07
	05/25/04	429.74	30.17	32.26	399.57	397.48	2.09	399.09
	05/25/04	429.74	30.15	32.24	399.59	397.50	2.09	399.11
	05/25/04	429.74	30.16	32.24	399.58	397.50	2.08	399.10
	05/26/04	429.74	30.14	32.23	399.60	397.51	2.09	399.12
	05/26/04	429.74	29.87	31.96	399.87	397.78	2.09	399.39

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-08[4]	05/27/04	429.74	29.61	31.73	400.13	398.01	2.12	399.64
	05/27/04	429.74	29.44	31.55	400.30	398.19	2.11	399.81
	05/28/04	429.74	29.28	31.39	400.46	398.35	2.11	399.97
	06/01/04	429.74	29.28	30.14	400.46	399.60	0.86	400.26
	06/01/04	429.74	28.06	30.16	401.68	399.58	2.1	401.20
	06/02/04	429.74	28.12	30.23	401.62	399.51	2.11	401.13
	06/02/04	429.74	28.07	30.18	401.67	399.56	2.11	401.18
	06/03/04	429.74	28.02	30.13	401.72	399.61	2.11	401.23
	06/03/04	429.74	27.83	29.94	401.91	399.80	2.11	401.42
	06/04/04	429.74	27.63	29.74	402.11	400.00	2.11	401.62
	06/10/04	429.74	26.90	29.00	402.84	400.74	2.1	402.36
HMW-09	01/27/04	430.23	DRY	DRY	DRY	DRY	DRY	DRY
	02/03/04	430.23	DRY	DRY	DRY	DRY	DRY	DRY
	02/16/04	430.23	DRY	DRY	DRY	DRY	DRY	DRY
	02/17/04	430.23	--	--	--	--	--	--
	02/19/04	430.23	DRY	DRY	DRY	DRY	DRY	DRY
	02/24/04	430.23	DRY	DRY	DRY	DRY	DRY	DRY
	03/08/04	430.23	DRY	DRY	DRY	DRY	DRY	DRY
	03/15/04	430.23	DRY	DRY	DRY	DRY	DRY	DRY
	04/20/04	430.23	DRY	DRY	DRY	DRY	DRY	DRY
	05/27/04	430.23	NA	23.18	NA	407.05	0	407.05
	06/03/04	430.23	NA	23.19	NA	407.04	0	407.04
	06/10/04	430.23	NA	23.18	NA	407.05	0	407.05
HMW-10	01/27/04	430.20	32.57	34.17	397.63	396.03	1.60	397.26
	02/03/04	430.20	32.78	34.68	397.42	395.52	1.90	396.98
	02/16/04	430.20	33.11	35.18	397.09	395.02	2.07	396.61
	02/17/04	430.20	33.13	35.26	397.07	394.94	2.13	396.58
	02/18/04	430.20	33.11	35.17	397.09	395.03	2.06	396.62
	02/19/04	430.20	33.00	35.03	397.2	395.17	2.03	396.73
	02/24/04	430.20	32.16	35.24	398.04	394.96	3.08	397.33
	02/27/04	430.20	33.05	34.86	397.15	395.34	1.81	396.73
	03/01/04	430.20	32.88	34.21	397.32	395.99	1.33	397.01
	03/02/04	430.20	33.05	34.61	397.15	395.59	1.56	396.79
	03/03/04	430.20	33.03	34.52	397.17	395.68	1.49	396.83
	03/04/04	430.20	32.80	33.91	397.4	396.29	1.11	397.14

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-10	03/05/04	430.20	32.78	33.93	397.42	396.27	1.15	397.16
	03/08/04	430.20	32.42	33.37	397.78	396.83	0.95	397.56
	03/09/04	430.20	32.30	33.23	397.9	396.97	0.93	397.69
	03/15/04	430.20	31.52	32.10	398.68	398.10	0.58	398.55
	03/16/04	430.20	31.41	32.07	398.79	398.13	0.66	398.64
	03/17/04	430.20	31.40	32.07	398.8	398.13	0.67	398.65
	03/18/04	430.20	31.42	32.14	398.78	398.06	0.72	398.61
	03/19/04	430.20	31.51	32.18	398.69	398.02	0.67	398.54
	03/23/04	430.20	31.34	32.08	398.86	398.12	0.74	398.69
	03/24/04	430.20	31.32	32.14	398.88	398.06	0.82	398.69
	03/30/04	430.20	31.09	31.75	399.11	398.45	0.66	398.96
	03/31/04	430.20	31.01	31.74	399.19	398.46	0.73	399.02
	04/01/04	430.20	30.84	31.59	399.36	398.61	0.75	399.19
	04/20/04	430.20	30.47	31.76	399.73	398.44	1.29	399.43
	05/27/04	430.20	30.09	30.79	400.11	399.41	0.70	399.95
	06/03/04	430.20	28.27	31.13	401.93	399.07	2.86	401.27
	06/10/04	430.20	26.73	31.07	403.47	399.13	4.34	402.47
HMW-13	01/27/04	430.81	NA	18.67	NA	412.14	0	412.14
	02/03/04	430.81	NA	18.69	NA	412.12	0	412.12
	02/16/04	430.81	NA	18.68	NA	412.13	0	412.13
	02/17/04	430.81	--	--	--	--	--	--
	02/19/04	430.81	NA	18.71	NA	412.10	0	412.10
	03/15/04	430.81	NA	18.71	NA	412.10	0	412.10
	04/20/04	430.81	NA	18.70	NA	412.11	0	412.11
	05/27/04	431.81	NA	18.67	NA	413.14	0	413.14
	06/03/04	431.81	NA	18.67	NA	413.14	0	413.14
	06/10/04	431.81	NA	18.67	NA	413.14	0	413.14
HMW-14	01/27/04	430.86	33.63	34.96	397.23	395.90	1.33	396.92
	02/03/04	430.86	33.80	35.70	397.06	395.16	1.90	396.62
	02/16/04	430.86	34.21	36.02	396.65	394.84	1.81	396.23
	02/17/04	430.86	--	--	--	--	--	--
	02/19/04	430.86	34.11	36.00	396.75	394.86	1.89	396.32
	03/04/04	430.86	33.75	34.75	397.11	396.11	1.00	396.88
	03/08/04	430.86	33.35	33.49	397.51	397.37	0.14	397.48
	03/15/04	430.86	32.18	32.42	398.68	398.44	0.24	398.62

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-14	03/18/04	430.86	32.12	32.58	398.74	398.28	0.46	398.63
	03/19/04	430.86	32.21	32.72	398.65	398.14	0.51	398.53
	03/30/04	430.86	31.81	32.20	399.05	398.66	0.39	398.96
	03/31/04	430.86	31.55	31.94	399.31	398.92	0.39	399.22
	04/20/04	430.86	31.43	32.44	399.43	398.42	1.01	399.20
	05/27/04	430.86	NA	30.89	NA	399.97	0.00	399.97
	06/03/04	430.86	29.04	30.09	401.82	400.77	1.05	401.58
	06/10/04	430.86	28.18	28.20	402.68	402.66	0.02	402.68
HMW-18	01/27/04	431.58	34.55	36.12	397.03	395.46	1.57	396.67
	03/15/04	431.58	33.11	34.04	398.47	397.54	0.93	398.26
	04/21/04	431.58	32.61	33.06	398.97	398.52	0.45	398.87
	05/27/04	431.58	31.73	32.56	399.85	399.02	0.83	399.66
	06/03/04	431.58	29.88	30.94	401.7	400.64	1.06	401.46
	06/10/04	431.58	28.33	30.30	403.25	401.28	1.97	402.80
HMW-19	01/27/04	431.80	34.90	35.72	396.9	396.08	0.82	396.71
	03/15/04	431.80	33.09	33.09	398.71	398.71	0	398.71
	04/21/04	431.80	32.29	33.29	399.51	398.51	1.00	399.28
	05/27/04	431.80	31.72	32.13	400.08	399.67	0.41	399.99
	06/03/04	431.80	30.31	32.45	401.49	399.35	2.14	401.00
	06/10/04	431.80	27.99	30.87	403.81	400.93	2.88	403.15
HMW-20	01/27/04	430.65	32.91	33.86	397.74	396.79	0.95	397.52
	03/15/04	430.65	31.24	32.88	399.41	397.77	1.64	399.03
	04/21/04	430.65	30	33.31	400.65	397.34	3.31	399.89
	05/27/04	430.65	29.53	32.75	401.12	397.90	3.22	400.38
	06/03/04	430.65	27.51	32.97	403.14	397.68	5.46	401.88
	06/10/04	430.65	26.42	32.91	404.23	397.74	6.49	402.74
HMW-21[4]	01/27/04	430.05	NA	21.93	NA	408.12	0	408.12
	02/17/04	430.05	NA	22.06	NA	407.99	0	407.99
	02/19/04	430.05	NA	22.00	NA	408.05	0	408.05
	03/15/04	430.05	NA	21.70	NA	408.35	0	408.35
	04/20/04	430.05	NA	21.42	NA	408.63	0	408.63
	05/27/04	430.05	NA	20.35	NA	409.70	0	409.70
	06/03/04	430.05	NA	19.76	NA	410.29	0	410.29
	06/10/04	430.05	NA	19.81	NA	410.24	0	410.24

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-22[4]	01/27/04	430.15	33.20	35.00	396.95	395.15	1.80	396.54
	02/17/04	430.15	33.70	36.42	396.45	393.73	2.72	395.82
	02/18/04	430.15	33.70	36.36	396.45	393.79	2.66	395.84
	02/19/04	430.15	33.51	36.24	396.64	393.91	2.73	396.01
	03/05/04	430.15	33.38	34.92	396.77	395.23	1.54	396.42
	03/08/04	430.15	32.64	33.48	397.51	396.67	0.84	397.32
	03/09/04	430.15	32.54	33.26	397.61	396.89	0.72	397.44
	03/15/04	430.15	31.59	32.74	398.56	397.41	1.15	398.30
	04/20/04	430.15	31.25	31.42	398.9	398.73	0.17	398.86
	05/20/04	430.15	31.47	32.30	398.68	397.85	0.83	398.49
	05/20/04	430.15	31.29	32.71	398.86	397.44	1.42	398.53
	05/21/04	430.15	31.10	32.64	399.05	397.51	1.54	398.70
	05/24/04	430.15	30.71	32.59	399.44	397.56	1.88	399.01
	05/24/04	430.15	30.52	32.59	399.63	397.56	2.07	399.15
	05/25/04	430.15	30.56	32.57	399.59	397.58	2.01	399.13
	05/25/04	430.15	30.47	32.56	399.68	397.59	2.09	399.20
	05/26/04	430.15	30.42	32.59	399.73	397.56	2.17	399.23
	05/26/04	430.15	30.21	32.49	399.94	397.66	2.28	399.42
	05/27/04	430.15	29.88	32.51	400.27	397.64	2.63	399.67
	05/27/04	430.15	29.68	32.54	400.47	397.61	2.86	399.81
	05/28/04	430.15	29.52	32.48	400.63	397.67	2.96	399.95
	06/01/04	430.15	27.93	32.94	402.22	397.21	5.01	401.07
	06/02/04	430.15	28.02	32.44	402.13	397.71	4.42	401.11
	06/02/04	430.15	27.94	32.44	402.21	397.71	4.50	401.18
	06/03/04	430.15	27.90	32.41	402.25	397.74	4.51	401.21
	06/03/04	430.15	27.66	32.41	402.49	397.74	4.75	401.40
	06/04/04	430.15	27.41	32.40	402.74	397.75	4.99	401.59
	06/10/04	430.15	26.43	32.39	403.72	397.76	5.96	402.35
HMW-25	01/27/04	427.45	NA	29.96	NA	397.49	0	397.49
	03/15/04	427.45	NA	27.31	NA	400.14	0	400.14
	04/21/04	427.45	NA	27.34	NA	400.11	0	400.11
	05/27/04	427.45	NA	25.93	NA	401.52	0	401.52
	06/03/04	427.45	NA	23.70	NA	403.75	0	403.75
	06/10/04	427.45	NA	22.52	NA	404.93	0	404.93

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-26	01/27/04	425.20	NA	27.15	NA	398.05	0	398.05
	03/15/04	425.20	NA	26.03	NA	399.17	0	399.17
	04/21/04	425.20	NA	24.64	NA	400.56	0	400.56
	05/27/04	425.20	NA	24.31	NA	400.89	0	400.89
	06/03/04	425.20	NA	23.13	NA	402.07	0	402.07
	06/10/04	425.20	NA	21.87	NA	403.33	0	403.33
HMW-27	01/27/04	430.75	NA	32.21	NA	398.54	0	398.54
	03/15/04[5]	430.75	NA	31.38	NA	399.37	0	399.37
	04/22/04	430.75	NA	29.90	NA	400.85	0	400.85
	06/10/04	430.75	NA	27.76	NA	402.99	0	402.99
HMW-28	01/27/04	430.97	NA	32.05	NA	398.92	0	398.92
	03/15/04	430.97	NA	30.58	NA	400.39	0	400.39
	04/21/04	430.97	NA	29.69	NA	401.28	0	401.28
	05/27/04	430.97	NA	29.31	NA	401.66	0	401.66
	06/03/04	430.97	NA	28.86	NA	402.11	0	402.11
	06/10/04	430.97	NA	26.77	NA	404.20	0	404.20
HMW-29	01/27/04	429.99	NA	30.64	NA	399.35	0	399.35
	03/15/04	429.99	NA	30.12	NA	399.87	0	399.87
	04/21/04	429.99	NA	28.70	NA	401.29	0	401.29
	05/27/04	429.99	NA	28.34	NA	401.65	0	401.65
	06/03/04	429.99	NA	27.93	NA	402.06	0	402.06
	06/10/04	429.99	NA	26.75	NA	403.24	0	403.24
HMW-30[4]	04/20/04	430.07	NA	31.29	NA	398.78	0	398.78
	05/20/04	430.07	NA	31.54	NA	398.53	0	398.53
	05/20/04	430.07	NA	31.55	NA	398.52	0	398.52
	05/21/04	430.07	NA	31.55	NA	398.52	0	398.52
	05/21/04	430.07	NA	31.39	NA	398.68	0	398.68
	05/24/04	430.07	NA	31.08	NA	398.99	0	398.99
	05/24/04	430.07	NA	30.92	NA	399.15	0	399.15
	05/25/04	430.07	NA	30.93	NA	399.14	0	399.14
	05/25/04	430.07	NA	30.86	NA	399.21	0	399.21
	05/26/04	430.07	NA	30.63	NA	399.44	0	399.44
	05/26/04	430.07	NA	30.39	NA	399.68	0	399.68
	05/27/04	430.07	NA	30.21	NA	399.86	0	399.86
	05/28/04	430.07	NA	30.10	NA	399.97	0	399.97

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-30[4]	06/01/03	430.07	NA	28.87	NA	401.20	0	401.20
	06/02/04	430.07	NA	28.93	NA	401.14	0	401.14
	06/02/04	430.07	NA	28.89	NA	401.18	0	401.18
	06/03/04	430.07	NA	28.84	NA	401.23	0	401.23
	06/03/04	430.07	NA	28.67	NA	401.40	0	401.40
	06/04/04	430.07	NA	28.47	NA	401.60	0	401.60
	06/10/04	430.07	NA	27.72	NA	402.35	0	402.35
HMW-31[4]	04/20/04	430.09	NA	31.27	NA	398.82	0	398.82
	05/20/04	430.09	NA	31.63	NA	398.46	0	398.46
	05/20/04	430.09	NA	31.50	NA	398.59	0	398.59
	05/21/04	430.09	NA	31.51	NA	398.58	0	398.58
	05/21/04	430.09	NA	31.42	NA	398.67	0	398.67
	05/24/04	430.09	NA	31.10	NA	398.99	0	398.99
	05/24/04	430.09	NA	30.95	NA	399.14	0	399.14
	05/25/04	430.09	NA	30.96	NA	399.13	0	399.13
	05/25/04	430.09	NA	30.88	NA	399.21	0	399.21
	05/26/04	430.09	NA	30.79	NA	399.30	0	399.30
	05/26/04	430.09	30.67	30.79	399.42	399.30	0.12	399.39
	05/27/04	430.09	NA	30.42	NA	399.67	0	399.67
	05/27/04	430.09	NA	30.24	NA	399.85	0	399.85
	05/28/04	430.09	NA	30.13	NA	399.96	0	399.96
	06/01/04	430.09	NA	28.72	NA	401.37	0	401.37
	06/02/04	430.09	NA	28.97	NA	401.12	0	401.12
	06/02/04	430.09	NA	28.93	NA	401.16	0	401.16
	06/02/04	430.09	NA	28.88	NA	401.21	0	401.21
	06/03/04	430.09	NA	28.72	NA	401.37	0	401.37
	06/04/04	430.09	NA	28.52	NA	401.57	0	401.57
	06/10/04	430.09	NA	27.77	NA	402.32	0	402.32
HMW-32[4]	04/20/04	430.01	NA	31.11	NA	398.90	0	398.90
	05/20/04	430.01	NA	31.30	NA	398.71	0	398.71
	05/20/04	430.01	NA	31.25	NA	398.76	0	398.76
	05/20/04	430.01	NA	31.24	NA	398.77	0	398.77
	05/20/04	430.01	NA	31.25	NA	398.76	0	398.76
	05/21/04	430.01	NA	31.19	NA	398.82	0	398.82
	05/21/04	430.01	NA	31.14	NA	398.87	0	398.87

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-32[4]	05/21/04	430.01	NA	31.10	NA	398.91	0	398.91
	05/21/04	430.01	NA	31.16	NA	398.85	0	398.85
	05/24/04	430.01	NA	30.88	NA	399.13	0	399.13
	05/24/04	430.01	NA	30.79	NA	399.22	0	399.22
	05/24/04	430.01	NA	30.75	NA	399.26	0	399.26
	05/24/04	430.01	NA	30.72	NA	399.29	0	399.29
	05/25/04	430.01	NA	30.78	NA	399.23	0	399.23
	05/25/04	430.01	NA	30.73	NA	399.28	0	399.28
	05/25/04	430.01	NA	30.72	NA	399.29	0	399.29
	05/25/04	430.01	NA	30.70	NA	399.31	0	399.31
	05/26/04	430.01	NA	30.57	NA	399.44	0	399.44
	05/26/04	430.01	NA	30.44	NA	399.57	0	399.57
	05/26/04	430.01	NA	29.70	NA	400.31	0	400.31
	05/27/04	430.01	NA	29.65	NA	400.36	0	400.36
	05/27/04	430.01	NA	29.47	NA	400.54	0	400.54
	05/28/04	430.01	NA	29.49	NA	400.52	0	400.52
	05/28/04	430.01	NA	29.43	NA	400.58	0	400.58
	06/01/04	430.01	NA	27.98	NA	402.03	0	402.03
	06/01/04	430.01	27.99	28.00	402.02	402.01	0.01	402.02
	06/02/04	430.01	28.07	28.09	401.94	401.92	0.02	401.94
	06/02/04	430.01	28.09	28.12	401.92	401.89	0.03	401.91
	06/02/04	430.01	28.11	28.12	401.90	401.89	0.01	401.90
	06/03/04	430.01	NA	28.09	NA	401.92	0	401.92
	06/03/04	430.01	NA	27.89	NA	402.12	0	402.12
	06/04/04	430.01	NA	27.68	NA	402.33	0	402.33
	06/04/04	430.01	NA	27.65	NA	402.36	0	402.36
	06/10/04	430.01	NA	26.82	NA	403.19	0	403.19
HMW-33[4]	04/20/04	430.13	NA	31.27	NA	398.86	0	398.86
	05/20/04	430.13	31.40	32.60	398.73	397.53	1.2	398.45
	05/20/04	430.13	31.36	32.52	398.77	397.61	1.16	398.50
	05/20/04	430.13	31.31	32.48	398.82	397.65	1.17	398.55
	05/20/04	430.13	31.32	32.50	398.81	397.63	1.18	398.54
	05/21/04	430.13	31.27	32.41	398.86	397.72	1.14	398.60
	05/21/04	430.13	31.25	32.36	398.88	397.77	1.11	398.62
	05/21/04	430.13	31.24	32.35	398.89	397.78	1.11	398.63

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
HMW-33[4]	05/21/04	430.13	31.23	32.35	398.90	397.78	1.12	398.64
	05/21/04	430.13	31.21	32.23	398.92	397.90	1.02	398.69
	05/24/04	430.13	30.81	32.23	399.32	397.90	1.42	398.99
	05/24/04	430.13	30.72	32.16	399.41	397.97	1.44	399.08
	05/24/04	430.13	30.64	32.11	399.49	398.02	1.47	399.15
	05/25/04	430.13	30.62	32.25	399.51	397.88	1.63	399.14
	05/25/04	430.13	30.62	32.24	399.51	397.89	1.62	399.14
	05/25/04	430.13	30.62	32.23	399.51	397.90	1.61	399.14
	05/25/04	430.13	30.60	32.23	399.53	397.90	1.63	399.16
	05/26/04	430.13	30.47	32.18	399.66	397.95	1.71	399.27
	05/26/04	430.13	30.31	32.09	399.82	398.04	1.78	399.41
	05/27/04	430.13	30.02	31.99	400.11	398.14	1.97	399.66
	05/27/04	430.13	29.99	31.97	400.14	398.16	1.98	399.68
	05/27/04	430.13	29.79	31.97	400.34	398.16	2.18	399.84
	05/28/04	430.13	29.65	31.94	400.48	398.19	2.29	399.95
	06/01/04	430.13	28.65	31.98	401.48	398.15	3.33	400.71
	06/01/04	430.13	28.05	32.10	402.08	398.03	4.05	401.15
	06/02/04	430.13	28.12	32.13	402.01	398.00	4.01	401.09
	06/02/04	430.13	28.13	32.16	402.00	397.97	4.03	401.07
	06/02/04	430.13	28.11	31.97	402.02	398.16	3.86	401.13
	06/03/04	430.13	28.05	31.94	402.08	398.19	3.89	401.19
	06/03/04	430.13	28.27	30.44	401.86	399.69	2.17	401.36
	06/04/04	430.13	27.73	31.45	402.40	398.68	3.72	401.54
	06/04/04	430.13	27.67	31.46	402.46	398.67	3.79	401.59
	06/10/04	430.13	26.57	32.24	403.56	397.89	5.67	402.26
RW-1	01/27/04	433.78	NA	36.18	NA	397.60	0	397.60
	03/15/04	433.78	NA	34.72	NA	399.06	0	399.06
	04/21/04	433.78	NA	33.93	NA	399.85	0	399.85
	05/27/04	433.78	NA	33.14	NA	400.64	0	400.64
	06/03/04	433.78	NA	31.73	NA	402.05	0	402.05
	06/10/04	433.78	NA	30.56	NA	403.22	0	403.22
RW-2	01/27/04	431.99	34.39	35.95	397.60	396.04	1.56	397.24
	02/03/04	431.99	34.60	36.35	397.39	395.64	1.75	396.99
	02/16/04	431.99	34.91	37.00	397.08	394.99	2.09	396.60

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
RW-2	02/17/04	431.99	35.12	36.61	396.87	395.38	1.49	396.53
	02/18/04	431.99	35.07	36.59	396.92	395.40	1.52	396.57
	02/19/04	431.99	34.97	36.33	397.02	395.66	1.36	396.71
	02/23/04	431.99	35.16	36.32	396.83	395.67	1.16	396.56
	02/24/04	431.99	35.21	36.22	396.78	395.77	1.01	396.55
	02/27/04	431.99	34.90	36.31	397.09	395.68	1.41	396.77
	03/01/04	431.99	34.80	35.58	397.19	396.41	0.78	397.01
	03/02/04	431.99	35.21	35.44	396.78	396.55	0.23	396.73
	03/03/04	431.99	35.14	35.37	396.85	396.62	0.23	396.80
	03/04/04	431.99	34.60	35.50	397.39	396.49	0.90	397.18
	03/05/04	431.99	34.79	35.17	397.20	396.82	0.38	397.11
	03/08/04	431.99	34.40	34.61	397.59	397.38	0.21	397.54
	03/09/04	431.99	34.24	34.61	397.75	397.38	0.37	397.66
	03/11/04	431.99	33.77	34.02	398.22	397.97	0.25	398.16
	03/15/04	431.99	33.37	33.50	398.62	398.49	0.13	398.59
	03/16/04	431.99	33.27	33.41	398.72	398.58	0.14	398.69
	03/17/04	431.99	33.21	33.58	398.78	398.41	0.37	398.69
	03/18/04	431.99	33.31	33.35	398.68	398.64	0.04	398.67
	03/19/04	431.99	33.40	33.61	398.59	398.38	0.21	398.54
	03/23/04	431.99	33.25	33.27	398.74	398.72	0.02	398.74
	03/24/04	431.99	33.28	33.32	398.71	398.67	0.04	398.70
	03/30/04	431.99	32.89	33.29	399.10	398.70	0.40	399.01
	03/31/04	431.99	32.89	33.14	399.10	398.85	0.25	399.04
	04/01/04	431.99	32.67	33.24	399.32	398.75	0.57	399.19
	04/20/04	431.99	32.28	33.68	399.71	398.31	1.40	399.39
	05/27/04	431.99	31.80	32.79	400.19	399.20	0.99	399.96
	06/03/04	431.99	30.27	32.16	401.72	399.83	1.89	401.29
	06/10/04	431.99	28.90	31.74	403.09	400.25	2.84	402.44
RW-3[4]	01/27/04	433.35	36.46	38.30	396.89	395.05	1.84	396.47
	02/03/04	433.35	36.82	38.54	396.53	394.81	1.72	396.13
	02/17/04	433.35	37.16	39.03	396.19	394.32	1.87	395.76
	02/18/04	433.35	37.50	37.71	395.85	395.64	0.21	395.80
	02/19/04	433.35	37.32	37.51	396.03	395.84	0.19	395.99

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
RW-3[4]	02/24/04	433.35	37.31	37.89	396.04	395.46	0.58	395.91
	03/05/04	433.35	36.61	38.11	396.74	395.24	1.50	396.40
	03/08/04	433.35	35.95	36.28	397.40	397.07	0.33	397.32
	03/15/04	433.35	35.06	35.22	398.29	398.13	0.16	398.25
	04/20/04	433.35	34.34	35.48	399.01	397.87	1.14	398.75
	05/20/04	433.35	NA	35.88	NA	397.47	0.00	397.47
	05/20/04	433.88	NA	35.88	NA	398.00	0.00	398.00
	05/20/04	433.88	NA	35.88	NA	398.00	0.00	398.00
	05/21/04	433.35	NA	35.87	NA	397.48	0.00	397.48
	05/21/04	433.35	NA	35.78	NA	397.57	0.00	397.57
	05/21/04	433.35	NA	35.77	NA	397.58	0.00	397.58
	05/24/04	433.35	35.59	35.72	397.76	397.63	0.13	397.73
	05/24/04	433.35	35.34	35.46	398.01	397.89	0.12	397.98
	05/24/04	433.35	35.30	35.34	398.05	398.01	0.04	398.04
	05/24/04	433.35	NA	30.31	NA	403.04	0.00	403.04
	05/24/04	433.35	NA	35.30	NA	398.05	0.00	398.05
	05/25/04	433.35	NA	35.30	NA	398.05	0.00	398.05
	05/25/04	433.35	NA	35.30	NA	398.05	0.00	398.05
	05/26/04	433.35	NA	35.28	NA	398.07	0.00	398.07
	05/26/04	433.35	NA	30.22	NA	403.13	0.00	403.13
	05/26/04	433.35	NA	30.17	NA	403.18	0.00	403.18
	05/26/04	433.35	NA	29.79	NA	403.56	0.00	403.56
	05/26/04	433.35	NA	31.95	NA	401.40	0.00	401.40
	05/26/04	433.35	NA	31.88	NA	401.47	0.00	401.47
	05/26/04	433.35	NA	30.36	NA	402.99	0.00	402.99
	05/26/04	433.35	NA	29.89	NA	403.46	0.00	403.46
	05/26/04	433.35	NA	29.86	NA	403.49	0.00	403.49
	05/27/04	433.35	NA	29.72	NA	403.63	0.00	403.63
	05/27/04	433.95	NA	34.50	NA	399.45	0.00	399.45
	05/27/04	433.95	NA	34.46	NA	399.49	0.00	399.49
	05/27/04	433.35	NA	35.44	NA	397.91	0	397.91
	05/28/04	433.35	NA	34.43	NA	398.92	0	398.92
	05/28/04	433.35	NA	34.35	NA	399.00	0	399.00

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
RW-3[4]	05/28/04	433.35	NA	34.17	NA	399.18	0	399.18
	06/01/04	433.35	NA	32.47	NA	400.88	0	400.88
	06/01/04	433.35	NA	32.78	NA	400.57	0	400.57
	06/01/04	433.35	NA	32.81	NA	400.54	0	400.54
	06/01/04	433.35	NA	32.96	NA	400.39	0	400.39
	06/02/04	433.35	NA	32.98	NA	400.37	0	400.37
	06/02/04	433.35	NA	33.22	NA	400.13	0	400.13
	06/02/04	433.35	NA	33.20	NA	400.15	0	400.15
	06/02/04	433.35	NA	33.19	NA	400.16	0	400.16
	06/03/04	433.35	NA	32.19	NA	401.16	0	401.16
	06/03/04	433.35	NA	37.07	NA	396.28	0	396.28
	06/04/04	433.35	NA	32.88	NA	400.47	0	400.47
	06/04/04	433.35	NA	32.70	NA	400.65	0	400.65
	06/10/04	433.35	32.00	33.01	401.35	400.34	1.01	401.12
RW-4[4]	04/20/04	429.65	--	--	--	--	--	
	05/20/04	429.65	NA	31.01	NA	398.64	0	398.64
	05/20/04	429.65	NA	30.96	NA	398.69	0	398.69
	05/21/04	429.65	NA	30.96	NA	398.69	0	398.69
	05/21/04	429.65	NA	30.87	NA	398.78	0	398.78
	05/24/04	429.65	NA	30.49	NA	399.16	0	399.16
	05/24/04	429.65	NA	30.43	NA	399.22	0	399.22
	05/25/04	429.65	NA	30.37	NA	399.28	0	399.28
	05/25/04	429.65	NA	30.34	NA	399.31	0	399.31
	05/26/04	429.65	NA	30.31	NA	399.34	0	399.34
	05/26/04	429.65	NA	30.25	NA	399.40	0	399.40
	05/27/04	429.65	NA	29.93	NA	399.72	0	399.72
	05/27/04	429.65	NA	29.77	NA	399.88	0	399.88
	05/28/04	429.65	NA	29.62	NA	400.03	0	400.03
	06/01/04	429.65	NA	28.29	NA	401.36	0	401.36
	06/02/04	429.65	NA	28.35	NA	401.30	0	401.30
	06/02/04	429.65	NA	28.34	NA	401.31	0	401.31
	06/03/04	429.65	NA	28.31	NA	401.34	0	401.34
	06/03/04	429.65	NA	28.18	NA	401.47	0	401.47

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
RW-4[4]	06/04/04	429.65	NA	27.95	NA	401.70	0	401.70
	06/10/04	429.65	NA	27.24	NA	402.41	0	402.41
MP-5S	01/27/04	429.83	NA	9.26	NA	420.57	0	420.57
	03/15/04	429.83	DRY	DRY	DRY	DRY	DRY	DRY
	04/20/04	429.83	DRY	DRY	DRY	DRY	DRY	DRY
MP-5D	01/27/04	430.09	NA	21.33	NA	408.76	0	408.76
	03/15/04	430.09	NA	20.63	NA	409.46	0	409.46
	04/20/04	430.09	NA	20.38	NA	409.71	0	409.71
MP-6S	01/27/04	430.15	DRY	DRY	DRY	DRY	DRY	DRY
	03/15/04	430.15	DRY	DRY	DRY	DRY	DRY	DRY
	04/20/04	430.15	DRY	DRY	DRY	DRY	DRY	DRY
MP-6D	01/27/04	430.13	NA	21.31	NA	408.82	0	408.82
	03/15/04	430.13	NA	20.70	NA	409.43	0	409.43
	04/20/04	430.13	NA	20.40	NA	409.73	0	409.73
MP-7S	01/27/04	430.17	NA	7.21	NA	422.96	0	422.96
	03/15/04	430.17	DRY	DRY	DRY	DRY	DRY	DRY
	04/20/04	430.17	NA	5.41	NA	424.76	0	424.76
MP-7D	01/27/04	430.16	NA	21.38	NA	408.78	0	408.78
	03/15/04	430.16	NA	20.78	NA	409.38	0	409.38
	04/20/04	430.16	NA	20.64	NA	409.52	0	409.52
MP-8S	01/27/04	430.20	DRY	DRY	DRY	DRY	DRY	DRY
	03/15/04	430.20	DRY	DRY	DRY	DRY	DRY	DRY
	04/20/04	430.20	DRY	DRY	DRY	DRY	DRY	DRY
MP-8D	01/27/04	430.14	22.29	22.32	407.85	407.82	0.03	407.84
	03/15/04	430.14	NA	21.70	NA	408.44	0	408.44
	04/21/04	430.14	21.64	21.73	408.50	408.41	0.09	408.48
MP-9S	01/27/04	430.05	NA	8.19	NA	421.86	0	421.86
	03/15/04	430.05	NA	8.41	NA	421.64	0	421.64
	04/20/04	430.05	NA	7.76	NA	422.29	0	422.29
MP-9D	01/27/04	430.00	21.40	21.41	408.60	408.59	0.01	408.60
	03/15/04	430.00	20.92	20.93	409.08	409.07	0.01	409.08
	04/21/04	430.00	20.89	20.90	409.11	409.10	0.01	409.11

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
MP-10S	01/27/04	430.53	DRY	DRY	DRY	DRY	DRY	DRY
	03/15/04	430.53	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	430.53	DRY	DRY	DRY	DRY	DRY	DRY
MP-10D	01/27/04	430.37	NA	19.70	NA	410.67	0	410.67
	03/15/04	430.37	NA	19.58	NA	410.79	0	410.79
	04/21/04	430.37	NA	19.27	NA	411.10	0	411.10
MP-11S	01/27/04	431.19	DRY	DRY	DRY	DRY	DRY	DRY
	03/15/04	431.19	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	431.19	DRY	DRY	DRY	DRY	DRY	DRY
MP-11D	01/27/04	431.19	NA	19.82	NA	411.37	0	411.37
	03/15/04	431.19	NA	19.72	NA	411.47	0	411.47
	04/21/04	431.19	NA	19.62	NA	411.57	0	411.57
MP-12S	01/27/04	431.70	--	--	--	--	--	--
	03/15/04	431.70	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	431.70	DRY	DRY	DRY	DRY	DRY	DRY
MP-12D	01/27/04	431.63	--	--	--	--	--	--
	03/15/04	431.63	NA	19.56	NA	412.07	0	412.07
	04/21/04	431.63	NA	19.50	NA	412.13	0	412.13
MP-13S	01/27/04	429.20	NA	7.97	NA	421.23	0	421.23
	03/15/04	429.20	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	429.20	NA	8.38	NA	420.82	0	420.82
MP-13D	01/27/04	429.30	DRY	DRY	DRY	DRY	DRY	DRY
	03/15/04	429.30	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	429.30	DRY	DRY	DRY	DRY	DRY	DRY
MP-14S	01/27/04	429.51	--	--	--	--	--	--
	03/15/04	429.51	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	429.51	NA	9.04	NA	420.47	0	420.47
MP-14D	01/27/04	429.51	--	--	--	--	--	--
	03/15/04	429.51	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	429.51	DRY	DRY	DRY	DRY	DRY	DRY
MP-15S	01/27/04	429.63	NA	6.01	NA	423.62	0	423.62
	03/15/04	429.63	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	429.63	NA	9.04	NA	420.59	0	420.59

TABLE 2-1
2004 Groundwater Elevations/Apparent Product Thickness
Village of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
MP-15D	01/27/04	429.58	--	--	--	--	--	--
	03/15/04	429.58	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	429.58	DRY	DRY	DRY	DRY	DRY	DRY
MP-16S	01/27/04	429.75	--	--	--	--	--	--
	03/15/04	429.75	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	429.75	DRY	DRY	DRY	DRY	DRY	DRY
MP-16D	01/27/04	429.77	DRY	DRY	DRY	DRY	DRY	DRY
	03/05/04	429.77	DRY	DRY	DRY	DRY	DRY	DRY
	04/21/04	429.77	DRY	DRY	DRY	DRY	DRY	DRY

NOTES:

NA = Not Applicable
-- = No data
SG = Specific gravity of hydrocarbon determined to be an average of 0.77 in the Village for data recorded during and after 09/03.
[1] Piezometric surface elevation = [(A)-(C)]+S.G.[(C)-(B)]
[2] HB-07 is obstructed at approximately 9 ft below top of casing (TOC); HB-27 is obstructed at approximately 14 ft below TOC.
[3] Located on private property. Access requires permission of owner; therefore, data may not be available for all gauging events.
[4] Wells where multiple readings have been collected on the same day as part of product recovery tests. The readings, listed in sequential order, do not present static conditions.
[5] MiniTROLL (automatic well gauging probe set at 38.21 ft below TOC) installed in HMW-27 (by ENSR in 2/04) was used to obtain gauging data on this date.
MP-series installed as vacuum monitoring probes by Clayton in 7/03 and are not appropriate for determining groundwater flow.
HMW-25 through HMW-29 installed by Clayton in 12/03.
HMW-30 through 33 and RW-4 installed as pilot test wells by Clayton in 3/04 and are not appropriate for determining groundwater flow.
Remaining wells installed by others.
TOC elevations surveyed to USGS datum by CMT.
All gauging data between 2/3/04 and 4/1/04 was obtained as part of product recovery tests conducted at RW-2 and RW-3. Therefore, this data does not present static conditions.

TABLE 2-2
2004 Groundwater Elevations/Apparent Product Thickness
Wells (P and SP-series) Outside of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
P-47	01/27/04	428.20	NA	33.53	NA	394.67	0	394.67
	04/20/04	428.20	NA	31.90	NA	396.30	0	396.30
P-51	01/27/04	426.62	NA	32.25	NA	394.37	0	394.37
	04/20/04	426.62	NA	30.57	NA	396.05	0	396.05
P-76	01/28/04	433.28	NA	34.54	NA	398.74	0	398.74
	04/22/04	433.28	NA	30.24	NA	403.04	0	403.04
P-77	01/28/04	434.57	NA	37.61	NA	396.96	0	396.96
	04/22/04	434.57	NA	35.83	NA	398.74	0	398.74
P-78	01/28/04	433.29	NA	36.08	NA	397.21	0	397.21
	04/22/04	433.29	NA	34.24	NA	399.05	0	399.05
P-79	01/28/04	432.65	NA	35.44	NA	397.21	0	397.21
	04/22/04	432.65	NA	33.69	NA	398.96	0	398.96
P-80	01/28/04	433.04	NA	35.32	NA	397.72	0	397.72
	04/22/04	433.04	NA	33.59	NA	399.45	0	399.45
P-81	01/28/04	433.20	NA	34.22	NA	398.98	0	398.98
	04/22/04	433.20	NA	32.42	NA	400.78	0	400.78
P-104	01/28/04	432.67	NA	14.51	NA	418.16	0	418.16
	04/22/04	432.67	NA	13.68	NA	418.99	0	418.99
P-105	01/28/04	432.54	NA	31.24	NA	401.30	0	401.30
	04/22/04	432.54	NA	30.23	NA	402.31	0	402.31
P-106	01/28/04	432.64	NA	35.31	NA	397.33	0	397.33
	04/22/04	432.64	NA	33.44	NA	399.20	0	399.20
P-107	01/28/04	431.83	NA	29.12	NA	402.71	0	402.71
	04/22/04	431.83	NA	27.82	NA	404.01	0	404.01
P-129	01/28/04	433.23	NA	34.32	NA	398.91	0	398.91
P-130	01/28/04	431.67	--	--	--	--	--	--

TABLE 2-2
2004 Groundwater Elevations/Apparent Product Thickness
Wells (P and SP-series) Outside of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
P-131	01/28/04	432.54	NA	11.38	NA	421.16	0	421.16
	04/22/04	432.54	NA	12.69	NA	419.85	0	419.85
P-132	01/28/04	432.08	NA	28.53	NA	403.55	0	403.55
	04/22/04	432.08	NA	27.57	NA	404.51	0	404.51
P-133	01/28/04	430.94	NA	13.57	NA	417.37	0	417.37
	04/22/04	430.94	NA	18.18	NA	412.76	0	412.76
P-134	01/28/04	432.46	NA	11.86	NA	420.60	0	420.60
	04/22/04	432.46	NA	12.63	NA	419.83	0	419.83
SP-1	01/28/04	429.00	--	--	--	--	--	--
	04/22/04	429.00	NA	10.53	NA	418.47	0	418.47
SP-2B	01/28/04	429.10	NA	26.66	NA	402.44	0	402.44
	04/22/04	429.10	NA	25.76	NA	403.34	0	403.34
SP-3	01/28/04	--	NA	9.91	NA	--	0	--
	04/22/04	--	NA	12.87	NA	--	0	--
SP-5	01/28/04	431.22	NA	10.01	NA	421.21	0	421.21
	04/22/04	431.22	NA	12.66	NA	418.56	0	418.56
SP-6	01/28/04	433.03	NA	10.56	NA	422.47	0	422.47
	04/22/04	433.03	NA	12.62	NA	420.41	0	420.41
SP-7	01/28/04	428.99	NA	8.47	NA	420.52	0	420.52
	04/22/04	428.99	NA	10.16	NA	418.83	0	418.83
SP-8	01/28/04	429.03	NA	8.28	NA	420.75	0	420.75
	04/22/04	429.03	NA	9.52	NA	419.51	0	419.51
SP-9	01/28/04	432.62	NA	10.62	NA	422.00	0	422.00
	04/22/04	432.62	NA	11.88	NA	420.74	0	420.74
SP-10	01/28/04	432.59	NA	10.75	NA	421.84	0	421.84
	04/22/04	432.59	NA	11.56	NA	421.03	0	421.03

TABLE 2-2
2004 Groundwater Elevations/Apparent Product Thickness
Wells (P and SP-series) Outside of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
SP-11	01/28/04	432.41	NA	10.27	NA	422.14	0	422.14
	04/22/04	432.41	NA	12.58	NA	419.83	0	419.83
SP-12	01/28/04	432.35	NA	29.61	NA	402.74	0	402.74
	04/22/04	432.35	NA	28.68	NA	403.67	0	403.67
SP-13	01/28/04	432.48	NA	33.82	NA	398.66	0	398.66
	04/22/04	432.48	NA	33.16	NA	399.32	0	399.32
SP-14	01/28/04	428.92	NA	28.51	NA	400.41	0	400.41
	04/22/04	428.92	NA	27.02	NA	401.90	0	401.90
SP-15	01/28/04	428.69	NA	9.18	NA	419.51	0	419.51
	04/22/04	428.69	NA	10.87	NA	417.82	0	417.82
SP-16	01/28/04	429.38	NA	8.91	NA	420.47	0	420.47
	04/22/04	429.38	NA	11.24	NA	418.14	0	418.14
SP-17	01/28/04	428.19	NA	9.06	NA	419.13	0	419.13
	04/22/04	428.19	NA	9.72	NA	418.47	0	418.47
SP-18	01/28/04	431.07	NA	31.43	NA	399.64	0	399.64
	04/22/04	431.07	NA	30.27	NA	400.80	0	400.80
SP-19	01/28/04	430.89	NA	13.95	NA	416.94	0	416.94
	04/22/04	430.89	NA	15.8	NA	415.09	0	415.09
SP-20	01/28/04	431.10	NA	12.42	NA	418.68	0	418.68
	04/22/04	431.10	NA	15.32	NA	415.78	0	415.78
SP-21	01/28/04	431.65	NA	14.38	NA	417.27	0	417.27
	04/22/04	431.65	NA	17.22	NA	414.43	0	414.43
SP-22	01/28/04	430.36	NA	9.98	NA	420.38	0	420.38
	04/22/04	430.36	NA	12.38	NA	417.98	0	417.98
SP-23	01/28/04	430.67	NA	10.19	NA	420.48	0	420.48
	04/22/04	430.67	NA	13.24	NA	417.43	0	417.43

TABLE 2-2
2004 Groundwater Elevations/Apparent Product Thickness
Wells (P and SP-series) Outside of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
SP-24	01/28/04	428.86	NA	8.29	NA	420.57	0	420.57
	04/22/04	428.86	NA	9.98	NA	418.88	0	418.88
SP-25	01/28/04	428.61	NA	8.13	NA	420.48	0	420.48
	04/22/04	428.61	NA	10.14	NA	418.47	0	418.47
SP-26	01/28/04	429.84	NA	9.41	NA	420.43	0	420.43
	04/22/04	429.84	NA	11.13	NA	418.71	0	418.71
SP-27	01/28/04	431.90	NA	11.28	NA	420.62	0	420.62
	04/22/04	431.90	NA	13.5	NA	418.40	0	418.40
SP-28	01/28/04	432.19	NA	10.63	NA	421.56	0	421.56
	04/22/04	432.19	NA	13.65	NA	418.54	0	418.54
SP-29	01/28/04	431.78	NA	11.16	NA	420.62	0	420.62
	04/22/04	431.78	NA	12.44	NA	419.34	0	419.34
SP-30	01/28/04	431.83	12.05	12.06	419.78	419.77	0.01	419.78
	04/22/04	431.83	NA	14.34	NA	417.49	0	417.49
SP-31	01/28/04	429.77	NA	10.19	NA	419.58	0	419.58
	04/22/04	429.77	NA	11.22	NA	418.55	0	418.55
SP-32	01/28/04	430.42	NA	10.84	NA	419.58	0	419.58
	04/22/04	430.42	NA	12.43	NA	417.99	0	417.99
SP-33	01/28/04	430.95	NA	10.52	NA	420.43	0	420.43
	04/22/04	430.95	NA	12.85	NA	418.10	0	418.10
SP-34	01/28/04	430.12	NA	10.95	NA	419.17	0	419.17
	04/22/04	430.12	NA	11.46	NA	418.66	0	418.66
SP-35	01/28/04	431.13	NA	10.70	NA	420.43	0	420.43
	04/22/04	431.13	NA	12.42	NA	418.71	0	418.71
SP-36	01/28/04	429.41	NA	32.50	NA	396.91	0	396.91
	04/22/04	429.41	NA	31.02	NA	398.39	0	398.39

TABLE 2-2
2004 Groundwater Elevations/Apparent Product Thickness
Wells (P and SP-series) Outside of Hartford, Illinois

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
SP-37	01/28/04	429.58	NA	24.12	NA	405.46	0	405.46
	04/22/04	429.58	NA	25.61	NA	403.97	0	403.97
SP-38	01/28/04	430.84	NA	19.38	NA	411.46	0	411.46
	04/22/04	430.84	NA	19.96	NA	410.88	0	410.88
SP-39	01/28/04	431.92	NA	11.88	NA	420.04	0	420.04
	04/22/04	431.92	NA	16.19	NA	415.73	0	415.73
SP-40	01/28/04	431.78	NA	28.60	NA	403.18	0	403.18
	04/22/04	431.78	NA	28.80	NA	402.98	0	402.98
SP-41	01/28/04	431.45	NA	35.33	NA	396.12	0	396.12
	04/22/04	431.45	NA	33.97	NA	397.48	0	397.48
SP-42	01/28/04	431.71	NA	35.42	NA	396.29	0	396.29
	04/22/04	431.71	NA	33.87	NA	397.84	0	397.84
SP-43	01/28/04	431.74	NA	29.61	NA	402.13	0	402.13
	04/22/04	431.74	NA	27.72	NA	404.02	0	404.02
SP-44	01/28/04	431.83	NA	14.11	NA	417.72	0	417.72
	04/22/04	431.83	NA	17.20	NA	414.63	0	414.63

NOTES:

NA = Not Applicable
-- = No data
SG = Specific gravity of hydrocarbon assumed to be 0.74 by others.
[1] Piezometric surface elevation = [(A)-(C)]+S.G.[(C)-(B)]
Well SP-4 no longer exists.
TOC elevations (except for SP-42, SP-43, & SP-44) have been rotated and adjusted to match USGS datum (datum used to survey Village wells). This rotation and adjustment of original survey data (obtained in 7/01 by CMT, Inc.) was completed in 1/04 by CMT. TOC elevations for SP-42, SP-43, and SP-44 were surveyed to USGS datum in 12/03 by CMT.

TABLE 2-3
2004 Groundwater Elevations/Apparent Product Thickness - Wells (RB-series) Outside of Hartford
Premcor Facility

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
RB-1	01/27/04	430.22	NA	31.13	NA	399.09	0	399.09
	04/20/04	430.22	NA	29.29	NA	400.93	0	400.93
TH2-88	01/27/04	--	NA	31.04	NA	--	--	--
	04/20/04	--	NA	29.84	NA	--	--	--
	06/03/04	--	NA	29.89	NA	--	--	--
@P7 Well	06/10/04	--	NA	29.54	NA	--	--	--
RB-08P	01/28/04	433.43	23.89	23.90	409.54	409.53	0.01	409.54
	04/20/04	433.43	23.64	23.65	409.79	409.78	0.01	409.79
RB-08	01/28/04	--	32.51	33.32	--	--	0.81	--
(Recovery Well)	04/20/04	--	30.84	31.16	--	--	0.32	--
RB-10*	01/28/04	430.03	31.02	31.25	399.01	398.78	0.23	398.96
	04/21/04	430.03	29.97	30.24	400.06	399.79	0.27	400.00
RB-13	01/27/04	--	NA	30.52	NA	--	0	--
	04/21/04	--	NA	29.20	NA	--	0	--
	05/27/04	--	NA	29.34	NA	--	0	--
	06/03/04	--	NA	29.69	NA	--	0	--
	06/10/04	--	NA	28.82	NA	--	0	--
RB-22	01/28/04	431.01	NA	31.02	NA	399.99	0	399.99
	04/21/04	431.01	NA	29.86	NA	401.15	0	401.15
	05/27/04	431.01	NA	30.22	NA	400.79	0	400.79
	06/03/04	431.01	NA	29.60	NA	401.41	0	401.41
	06/10/04	431.01	28.91	28.92	402.1	402.09	0.01	402.10
RB-25	01/27/04	432.11	NA	31.84	NA	400.27	0	400.27
	04/20/04	432.11	NA	31.95	NA	400.16	0	400.16
	05/27/04	432.11	32.10	32.11	400.01	400.00	0.01	400.01
	06/03/04	432.11	NA	32.44	NA	399.67	0	399.67
	06/10/04	432.11	30.48	30.49	401.63	401.62	0.01	401.63
RB-26	01/27/04	430.03	NA	31.41	NA	398.62	0	398.62
	04/20/04	430.03	NA	29.73	NA	400.30	0	400.30

TABLE 2-3
2004 Groundwater Elevations/Apparent Product Thickness - Wells (RB-series) Outside of Hartford
Premcor Facility

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
RB-26	05/27/04	430.03	NA	30.40	NA	399.63	0	399.63
	06/03/04	430.03	NA	29.61	NA	400.42	0	400.42
	06/10/04	430.03	NA	28.69	NA	401.34	0	401.34
RB-29	01/28/04	431.89	13.70	13.88	418.19	418.01	0.18	418.15
	04/20/04	431.89	13.61	13.74	418.28	418.15	0.13	418.25
RB-30	01/28/04	431.89	NA	32.30	NA	399.59	0	399.59
	04/20/04	431.89	NA	31.26	NA	400.63	0	400.63
	05/27/04	431.89	NA	31.44	NA	400.45	0	400.45
	06/03/04	431.89	NA	31.40	NA	400.49	0	400.49
	06/10/04	431.89	NA	30.76	NA	401.13	0	401.13
RB-35	01/28/04	429.85	29.10	29.54	400.75	400.31	0.44	400.65
	04/21/04	429.85	27.45	28.80	402.4	401.05	1.35	402.10
	06/03/04	429.85	--	--	--	--	--	--
RB-36	01/28/04	429.16	NA	23.32	NA	405.84	0	405.84
	04/20/04	429.16	NA	21.83	NA	407.33	0	407.33
RB-37*	01/28/04	428.38	29.32	32.35	399.06	396.03	3.03	398.39
	04/20/04	428.38	27.57	32.11	400.81	396.27	4.54	399.81
RB-38	01/27/04	433.69	NA	35.02	NA	398.67	0	398.67
	04/20/04	433.69	NA	33.94	NA	399.75	0	399.75
	05/27/04	433.69	NA	34.08	NA	399.61	0	399.61
	06/03/04	433.69	NA	34.18	NA	399.51	0	399.51
	06/10/04	433.69	NA	33.55	NA	400.14	0	400.14
RB-39	01/27/04	431.48	NA	26.90	NA	404.58	0	404.58
	04/20/04	431.48	NA	25.83	NA	405.65	0	405.65
	05/27/04	431.48	NA	24.46	NA	407.02	0	407.02
	06/03/04	431.48	NA	23.73	NA	407.75	0	407.75
	06/10/04	431.48	NA	23.38	NA	408.10	0	408.10
RB-40	01/27/04	433.50	NA	34.12	NA	399.38	0	399.38
	04/20/04	433.50	NA	33.51	NA	399.99	0	399.99

TABLE 2-3
2004 Groundwater Elevations/Apparent Product Thickness - Wells (RB-series) Outside of Hartford
Premcor Facility

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
RB-40	05/27/04	433.50	NA	33.57	NA	399.93	0	399.93
	06/03/04	433.50	NA	33.73	NA	399.77	0	399.77
	06/10/04	433.50	NA	33.30	NA	400.20	0	400.20
RB-41	01/27/04	433.24	NA	33.72	NA	399.52	0	399.52
	04/20/04	433.24	NA	33.34	NA	399.90	0	399.90
	05/27/04	433.24	NA	33.48	NA	399.76	0	399.76
	06/03/04	433.24	NA	33.66	NA	399.58	0	399.58
	06/10/04	433.24	NA	33.32	NA	399.92	0	399.92
RB-42	01/27/04	428.45	NA	28.33	NA	400.12	0	400.12
	04/20/04	428.45	NA	28.27	NA	400.18	0	400.18
	05/27/04	428.45	NA	28.29	NA	400.16	0	400.16
	06/03/04	428.45	NA	28.52	NA	399.93	0	399.93
	06/10/04	428.45	NA	28.24	NA	400.21	0	400.21
RB-43	01/27/04	427.95	NA	25.54	NA	402.41	0	402.41
	04/20/04	427.95	NA	25.85	NA	402.10	0	402.10
	05/27/04	427.95	NA	25.48	NA	402.47	0	402.47
	06/03/04	427.95	NA	25.45	NA	402.50	0	402.50
	06/10/04	427.95	NA	25.36	NA	402.59	0	402.59
RB-44	01/27/04	432.95	NA	31.93	NA	401.02	0	401.02
	04/20/04	432.95	NA	30.95	NA	402.00	0	402.00
	05/27/04	432.95	30.54	30.55	402.41	402.40	0.01	402.41
	06/03/04	432.95	NA	30.52	NA	402.43	0	402.43
	06/10/04	432.95	NA	30.33	NA	402.62	0	402.62
RB-45	01/27/04	431.92	NA	30.41	NA	401.51	0	401.51
	04/20/04	431.92	NA	30.04	NA	401.88	0	401.88
	05/27/04	431.92	29.79	29.80	402.13	402.12	0.01	402.13
	06/03/04	431.92	29.79	29.80	402.13	402.12	0.01	402.13
	06/10/04	431.92	NA	29.45	NA	402.47	0	402.47

TABLE 2-3
2004 Groundwater Elevations/Apparent Product Thickness - Wells (RB-series) Outside of Hartford
Premcor Facility

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
RB-46	01/28/04	430.62	NA	30.43	NA	400.19	0	400.19
	04/21/04	430.62	NA	29.40	NA	401.22	0	401.22
	05/27/04	430.62	NA	29.51	NA	401.11	0	401.11
	06/03/04	430.62	NA	29.22	NA	401.40	0	401.40
	06/10/04	430.62	NA	28.55	NA	402.07	0	402.07
RB-47	01/28/04	431.12	NA	31.18	NA	399.94	0	399.94
	04/21/04	431.12	NA	30.13	NA	400.99	0	400.99
	05/27/04	431.12	NA	30.25	NA	400.87	0	400.87
	06/03/04	431.12	NA	29.90	NA	401.22	0	401.22
	06/10/04	431.12	NA	29.17	NA	401.95	0	401.95
RB-48*	01/28/04	431.26	29.49	32.56	401.77	398.70	3.07	401.09
	04/21/04	431.26	28.54	30.65	402.72	400.61	2.11	402.26
	05/27/04	431.26	--	--	--	--	--	--
	06/03/04	431.26	--	--	--	--	--	--
RB-49	01/28/04	429.31	NA	2.80	NA	426.51	0	426.51
	04/21/04	429.31	NA	3.21	NA	426.10	0	426.10
	05/27/04	429.31	NA	2.35	NA	426.96	0	426.96
	06/03/04	429.31	NA	2.57	NA	426.74	0	426.74
	06/10/04	429.31	NA	2.45	NA	426.86	0	426.86
RB-50	01/28/04	431.50	NA	4.80	NA	426.70	0	426.70
	04/21/04	431.50	NA	6.08	NA	425.42	0	425.42
	05/27/04	431.50	2.75	2.76	428.75	428.74	0.01	428.75
	06/03/04	431.50	NA	4.06	NA	427.44	0	427.44
	06/10/04	431.50	4.62	4.63	426.88	426.87	0.01	426.88
RB-51	01/28/04	431.58	NA	31.01	NA	400.57	0	400.57
	04/21/04	431.58	NA	29.24	NA	402.34	0	402.34
	05/27/04	431.58	NA	28.70	NA	402.88	0	402.88
	06/03/04	431.58	NA	27.78	NA	403.80	0	403.80
	06/10/04	431.58	26.90	26.91	404.68	404.67	0.01	404.68

TABLE 2-3
2004 Groundwater Elevations/Apparent Product Thickness - Wells (RB-series) Outside of Hartford
Premcor Facility

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
RB-52*	01/28/04	432.02	NA	32.96	NA	399.06	0	399.06
	04/21/04	432.02	NA	31.26	NA	400.76	0	400.76
RB-53*	01/28/04	433.84	34.55	34.56	399.29	399.28	0.01	399.29
	04/20/04	433.84	NA	32.37	NA	401.47	0	401.47
RB-54	01/27/04	431.88	NA	20.11	NA	411.77	0	411.77
	04/20/04	431.88	NA	21.58	NA	410.30	0	410.30
	05/27/04	431.88	NA	17.54	NA	414.34	0	414.34
	06/03/04	431.88	NA	16.62	NA	415.26	0	415.26
	06/10/04	431.88	NA	17.63	NA	414.25	0	414.25
RB-55*	01/28/04	434.21	33.39	33.40	400.82	400.81	0.01	400.82
	04/21/04	434.21	29.97	37.42	404.24	396.79	7.45	402.60
RB-56*	01/28/04	431.91	32.16	35.64	399.75	396.27	3.48	398.98
	04/21/04	431.91	31.35	33.40	400.56	398.51	2.05	400.11
GB-1	01/27/04	431.55	NA	29.07	NA	402.48	0	402.48
	04/20/04	431.55	NA	29.41	NA	402.14	0	402.14
	05/27/04	431.55	NA	28.83	NA	402.72	0	402.72
	06/03/04	431.55	NA	28.79	NA	402.76	0	402.76
	06/10/04	431.55	NA	28.76	NA	402.79	0	402.79
GB-6	01/27/04	430.53	NA	29.44	NA	401.09	0	401.09
	04/20/04	430.53	NA	29.62	NA	400.91	0	400.91
	05/27/04	430.53	NA	29.38	NA	401.15	0	401.15
	06/03/04	430.53	NA	29.49	NA	401.04	0	401.04
	06/10/04	430.53	NA	29.32	NA	401.21	0	401.21
LP-4	01/27/04	432.53	NA	31.64	NA	400.89	0	400.89
	04/20/04	432.53	NA	31.36	NA	401.17	0	401.17
	05/27/04	432.53	NA	31.22	NA	401.31	0	401.31
	06/03/04	432.53	NA	31.29	NA	401.24	0	401.24
	06/10/04	432.53	NA	30.96	NA	401.57	0	401.57

TABLE 2-3
2004 Groundwater Elevations/Apparent Product Thickness - Wells (RB-series) Outside of Hartford
Premcor Facility

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

WELL	DATE	(A) Top of Casing Elevation (ft)	(B) Depth to Hydrocarbon (ft)	(C) Depth to Water (ft)	(A)-(B) Hydrocarbon Surface Elevation (ft)	(A)-(C) Water Surface Elevation (ft)	(C)-(B) Hydrocarbon Thickness (ft)	Piezometric Surface Elevation[1] (ft)
T-1*	01/28/04	--	29.47	32.50	--	--	3.03	--
	04/21/04	--	28.55	30.61	--	--	2.06	--
MP-1S	04/21/04	--	NA	24.46	NA	--	0	--
MP-1D	04/21/04	--	30.16	30.20	--	--	0.04	--
MP-2S	04/21/04	--	NA	29.67	NA	--	0	--
MP-2D	04/21/04	--	NA	27.00	NA	--	0	--
MP-3S	04/21/04	--	NA	29.26	NA	--	0	--
MP-3D	04/21/04	--	NA	18.66	NA	--	0	--
MP-4S	04/21/04	--	--	--	--	--	--	--
MP-4D	04/21/04	--	--	--	--	--	--	--
SVE-1S	04/21/04	--	--	--	--	--	--	--
SVE-1D*	04/20/04	--	29.65	29.71	--	--	0.06	--
Product Pipeline Sump	04/21/04	--	13.79	13.80	--	--	0.01	--
	06/03/04	--	NA	13.40	NA	--	0	--
	06/10/04	--	13.38	13.39	--	--	0.01	--

NOTES:

NA = Not Applicable
-- = No data
[1] Piezometric surface elevation = [(A)-(C)]+S.G.[(C)-(B)]
* Well contains active product recovery pump.
SG = Specific gravity of hydrocarbon determined to be an average of 0.78 on the Premcor facility for data recorded during and after 9/03.
MP- and SVE-series installed by Clayton in 6/03. MP-series installed as vacuum monitoring probes. SVE-series installed as soil vapor extraction wells.
MP- and SVE-series not appropriate for determining groundwater flow.
Remaining wells installed by others.
MP- and SVE-series, and RB-13, T-1, TH2-88@P7 well and RB-08 (recovery well) well TOC elevations to be determined by Illinois-licensed surveyor.
TOC elevations rotated and adjusted to match USGS datum (datum used to survey Village wells). This rotation and adjustment of original survey data (obtained in 6/02 by CMT, Inc.) was completed in 1/04 by CMT.

TABLE 3-1
Compound/Analyte List for Water Samples
VOCs
Village of Hartford

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

PARAMETER	PREPARATION METHOD		ANALYTICAL METHOD		COMPOUND	METHOD DETECTION LIMIT *	PRACTICAL QUANTITATION LIMIT *	ACCEPTABLE DETECTION LIMIT **
	Source	Method No.	Source	Method No.				
VOCs						(µg/L)	(µg/L)	(µg/L)
	SW-846	5030	SW-846	8260	Benzene	0.5	2	5
	SW-846	5030	SW-846	8260	Carbon disulfide	1	5	700
	SW-846	5030	SW-846	8260	Chlorobenzene	1	5	100
	SW-846	5030	SW-846	8260	Chloroform	1	5	0.2
	SW-846	5030	SW-846	8260	1,2-Dibromoethane or Ethylene dibromide (EDB)	1	5	0.05
	SW-846	5030	SW-846	8260	1,2-Dichlorobenzene	1	5	600
	SW-846	5030	SW-846	8260	1,3-Dichlorobenzene	1	5	NA
	SW-846	5030	SW-846	8260	1,4-Dichlorobenzene	1	5	75
	SW-846	5030	SW-846	8260	1,1-Dichloroethane	1	5	700
	SW-846	5030	SW-846	8260	1,2-Dichloroethane	1	5	5
	SW-846	5030	SW-846	8260	Ethylbenzene	1	5	700
	SW-846	5030	SW-846	8260	Methyl ethyl ketone (MEK) or 2-Butanone	5	50	NA
	SW-846	5030	SW-846	8260	Methyl tertiary butyl ether (MTBE)	0.5	2	70
	SW-846	5030	SW-846	8260	Styrene	1	5	100
	SW-846	5030	SW-846	8260	1,1,1-Trichloroethane	1	5	200
	SW-846	5030	SW-846	8260	Tetrachloroethene	1	5	5
	SW-846	5030	SW-846	8260	Toluene	1	5	1,000
	SW-846	5030	SW-846	8260	Trichloroethene	1	5	5
	SW-846	5030	SW-846	8260	o, m, p-Xylenes (total)	1	5	10,000
	SW-846	3510	SW-846	8015	1,4-Dioxane	250	500	NA

NOTES:

µg/L = Micrograms per liter
* = Method detection limit and practical quantitation limit as identified by Teklab, Inc. (Ottensmeier, 2004).
** = Acceptable detection limit is the IPCB TACO Tier 1 Groundwater Remediation Objective for Class I Groundwater.
NA = Not available

TABLE 3-1
Compound/Analyte List for Water Samples
SVOCs
Village of Hartford

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

PARAMETER	PREPARATION METHOD		ANALYTICAL METHOD		COMPOUND	METHOD DETECTION LIMIT *	PRACTICAL QUANTITATION LIMIT *	ACCEPTABLE DETECTION LIMIT **
	Source	Method No.	Source	Method No.				
SVOCs						(mg/L)	(mg/L)	(mg/L)
	SW-846	3510	SW-846	8310	Acenaphthene	0.002	0.005	0.42
	SW-846	3510	SW-846	8310	Anthracene	0.0001	0.005	2.1
	SW-846	3510	SW-846	8310	Benzo(a)anthracene	0.00005	0.0001	0.00013
	SW-846	3510	SW-846	8310	Benzo(b)fluoranthene	0.0001	0.00018	0.00018
	SW-846	3510	SW-846	8310	Benzo(k)fluoranthene	0.0001	0.00017	0.00017
	SW-846	3510	SW-846	8310	Benzo(a)pyrene	0.0001	0.0002	0.0002
	SW-846	3510	SW-846	8270	Bis(2-ethylhexyl)phthalate	0.004	0.006	0.006
	SW-846	3510	SW-846	8310	Chrysene	0.0003	0.0008	0.0015
	SW-846	3510	SW-846	8270	o-Cresol	0.001	0.01	0.35
	SW-846	3510	SW-846	8270	m-Cresol	0.001	0.01	NA
	SW-846	3510	SW-846	8270	p-Cresol	0.001	0.01	NA
	SW-846	3510	SW-846	8270	Di-n-butyl phthalate	0.003	0.01	0.7
	SW-846	3510	SW-846	8310	Dibenzo(a,h)anthracene	0.0002	0.0003	0.0003
	SW-846	3510	SW-846	8270	Diethyl phthalate	0.002	0.01	5.6
	SW-846	3510	SW-846	8270	2,4-Dimethylphenol	0.001	0.01	0.14
	SW-846	3510	SW-846	8270	Dimethyl phthalate	0.001	0.01	NA
	SW-846	3510	SW-846	8270	2,4-Dinitrophenol	0.001	0.01	0.014
	SW-846	3510	SW-846	8310	Fluoranthene	0.0005	0.002	0.28
	SW-846	3510	SW-846	8310	Fluorene	0.0004	0.001	0.28
	SW-846	3510	SW-846	8310	Indeno(1,2,3-cd)pyrene	0.0001	0.0004	0.00043
	SW-846	3510	SW-846	8310	Napthalene	0.002	0.005	0.14
	SW-846	3510	SW-846	8270	4-Nitrophenol	0.001	0.01	NA
	SW-846	3510	SW-846	8310	Phenanthrene	0.0005	0.005	NA
	SW-846	3510	SW-846	8270	Phenol	0.001	0.005	0.1
	SW-846	3510	SW-846	8310	Pyrene	0.0001	0.002	0.21
	SW-846	3510	SW-846	8270	Pyridine	0.005	0.02	NA
	SW-846	3510	SW-846	8270	Quinoline	0.001	0.005	NA

NOTES:

mg/L = Milligrams per liter NA = Not available (L) = This is the lowest limit able to be achieved by current methodologies.
µg/L = Micrograms per liter
* = Method detection limit and practical quantitation limit as identified by Teklab, Inc. (Ottensmeier, 2004).
** = Acceptable detection limit is the IPCB TACO Tier 1 Groundwater Remediation Objective for Class I Groundwater.

TABLE 3-1
Compound/Analyte List for Water Samples
Inorganics
Village of Hartford

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

PARAMETER	PREPARATION METHOD		ANALYTICAL METHOD		COMPOUND	METHOD DETECTION LIMIT *	PRACTICAL QUANTITATION LIMIT *	ACCEPTABLE DETECTION LIMIT **
	Source	Method No.	Source	Method No.				
Metals						(mg/L)	(mg/L)	(mg/L)
	SW-846	3020A	SW-846	7041	Antimony	0.0017	0.005	0.006
	SW-846	3020A	SW-846	7060A	Arsenic	0.0007	0.003	0.05
	SW-846	3005A	SW-846	6010	Barium	0.0024	0.005	2
	SW-846	3005A	SW-846	6010	Beryllium	0.003	0.001	0.004
	SW-846	3005A	SW-846	6010	Cadmium	0.0003	0.002	0.005
	SW-846	3005A	SW-846	6010	Chromium-Total	0.004	0.01	0.1
	SW-846	3005A	SW-846	6010	Cobalt	0.0022	0.01	1
	SW-846	3020A	SW-846	7421	Lead	0.0004	0.002	0.0075
	--	--	SW-846	7470	Mercury	0.00005	0.0002	0.002
	SW-846	3005A	SW-846	6010	Nickel	0.0033	0.01	0.1
	SW-846	3020A	SW-846	7740	Selenium	0.0035	0.006	0.05
	SW-846	3005A	SW-846	6010	Silver	0.0032	0.01	0.05
	SW-846	3005A	SW-846	6010	Vanadium	0.0032	0.01	0.049
	SW-846	3005A	SW-846	6010	Zinc	0.0021	0.01	5
General						(mg/L)	(mg/L)	(mg/L)
	--	--	SW-846	9012A	Cyanide Total	0.0026	0.007	0.2

NOTES:

mg/L = Milligrams per liter [except for ph (unitless)].
* = Method detection limit and practical quantitation limit as identified by Teklab, Inc. (Ottensmeier, 2004).
NA = Not available
-- = Not applicable

TABLE 3-2
Sample Container, Preservation, and Holding Time Requirements For
Water Samples

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

PARAMETER	ANALYSIS	HOLDING TIME	CONTAINER	PRESERVATION
Organics	VOCs	14 days	3-40 ml VOC vials	HCl to pH < 2, no headspace Maintained at 4 + 2 degrees Celsius
	1,4-Dioxane	7 days	3-40 ml VOC vials	Unpreserved, no headspace Maintained at 4 + 2 degrees Celsius
	SVOCs	7 days	2 L amber glass jars	Unpreserved Maintained at 4 + 2 degrees Celsius
Metals	Inorganic Metals	180 days	250 ml plastic jar	HNO_3 to pH<2 Maintained at 4 + 2 degrees Celsius
	Mercury	28 days		
General	Total Cyanide	14 days	500 ml plastic jar	NaOH to pH>12 Maintained at 4 + 2 degrees Celsius

NOTES:

Sentinel Wells: HMW-25, HMW-26, HMW-27, HMW-28, and HMW-29.
VOCs include Ethylene Dibromide (1,2-Dibromoethane).
All compounds/analytes to be unfiltered.
Samples to be analyzed for the "Skinner List" as identified in Item 47 of the Administrative Order on Consent (AOC).
Compounds/analytes based on USEPA Region 5 Waste Management Branch "Skinner List" Constituents of Concern for Wastes from Petroleum Processes.

TABLE 3-3
Groundwater Analytical Results - Skinner List
Samples Collected December 2003
(Not Including the Five Sentinel Wells)

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

CHEMICAL NAME	Taco Tier 1 Groundwater Remediation Objectives (1)	Well Number							
	Class I	HMW-1 12/17/03 (Rand Stratum)	HMW-3 12/18/03 (EPA Stratum)	Dup-01 (HMW-3) 12/18/03 (EPA Stratum)	HMW-4 12/18/03 (Rand Stratum)	HMW-7 12/17/03 (Rand Stratum)	HMW-21 12/17/03 (Multiple Strata)	RW-1 12/18/03 (Main Sand)	Dup-02 (RW-1) 12/18/03 (Main Sand)
Metals (mg/L)	(mg/L)								
Barium	2	0.206	0.483	0.479	0.640	0.590	0.537	0.513	0.508
Beryllium	0.004	<0.0010	0.0008 J	0.0003 J	0.0009 J	<0.0010	0.0004 J	0.0004J	0.0004 J
Cadmium	0.005	0.0003 J	0.0007 J	0.0009 J	0.0026	<0.0020	0.0007 J	<0.002	<0.0020
Chromium	0.1	<0.0100	0.0050 J	0.0059 J	0.0805	<0.0100	<0.0100	<0.010	<0.0100
Cobalt	1	<0.0100	0.0091 J	0.0086 J	0.0333	0.0054 J	0.0294	0.0067J	0.0057 J
Nickel	0.1	0.0043 J	0.0209	0.0188	0.0845	0.0078 J	**0.146**	0.0058J	0.0037 J
Silver	0.05	0.0088 J	<0.0100	<0.0100	<0.0100	0.0055 J	<0.0100	<0.010	<0.0100
Vanadium	0.049	0.0069 J	0.0067 J	0.0051 J	**0.108**	0.0088 J	0.0077 J	<0.010	<0.0100
Zinc	5	0.0034 J	0.207	0.206	0.660	0.0070 J	0.948	0.0314	0.0335
Antimony	0.006	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.0050
Arsenic	0.05	**0.0621**	0.0450	0.0429	**0.138**	**0.184**	**0.133**	0.0112	0.0117
Lead	0.0075	0.0010 J	**0.0167**	**0.0158**	**0.0703**	**0.0139**	**0.102**	**0.0851**	**0.0782**
Selenium	0.05	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.006	<0.0060
SVOCs (mg/L)	(mg/L)								
2,4-Dimethylphenol	0.14	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	0.003 J	0.006 J
2,4-Dinitrophenol	0.014	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010	<0.010
4-Nitrophenol	NL	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010	<0.010
Bis(2-ethylhexyl)phthalate	0.006	<0.006	0.005 J	**0.009**	**0.030**	<0.006	**0.007**	<0.006	<0.006
Di-n-butyl phthalate	0.7	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010	<0.010
Diethyl phthalate	5.6	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010	<0.010
Dimethyl phthalate	NL	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010	<0.010
m,p-Cresol	NL	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010	<0.010
o-Cresol	0.35	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010	<0.010
Phenol	0.1	<0.005	0.016	0.011	<0.005	<0.005	<0.005	<0.005	<0.005
Pyridine	NL	<0.021	<0.021	<0.020	<0.021	<0.021	<0.020	<0.020	<0.020
Quinoline	NL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthene	0.42	<0.00500	<0.00500	<0.00500	<0.0500	<0.00500	<0.00500	<0.0250	<0.0250
Anthracene	2.1	<0.00500	<0.00500	<0.00500	<0.0500	<0.00500	<0.00500	<0.0250	<0.0250
Benzo(a)anthracene	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050
Benzo(a)pyrene	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00100	<0.00100
Benzo(b)fluoranthene	0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00090	<0.00090
Benzo(k)fluoranthene	0.00017	<0.00017	<0.00017	<0.00017	<0.00017	<0.00017	<0.00017	<0.00085	<0.00085
Chrysene	0.0015	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00400	<0.00400
Dibenzo(a,h)anthracene	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00150	<0.00150
Fluoranthene	0.28	<0.00200	0.0123	0.00930	0.0851	<0.00200	<0.00200	<0.0100	<0.0100
Fluorene	0.28	<0.00100	0.0156	0.0156	0.0391	0.00206	<0.00100	0.00662	0.00600
Indeno(1,2,3-cd)pyrene	0.00043	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00200	<0.00200
Naphthalene	0.14	<0.00500	<0.00500	0.0229	<0.0500	0.0999	<0.00500	**0.449**	**0.492**
Phenanthrene	NL	<0.00500	0.0245	0.0230	0.104	<0.00500	<0.00500	<0.0250	<0.0250
Pyrene	0.21	<0.00200	<0.00200	<0.00200	<0.0200	<0.00200	<0.00200	<0.0100	<0.0100
Metals (mg/L)	(mg/L)								
Mercury	0.002	<0.00020	<0.00020	<0.00020	0.00007 J	<0.00020	<0.00020	<0.0002	<0.00020

TABLE 3-3
Groundwater Analytical Results - Skinner List
Samples Collected December 2003
(Not Including the Five Sentinel Wells)

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

CHEMICAL NAME	Taco Tier 1 Groundwater Remediation Objectives (1)	Well Number							
	Class I	HMW-1 12/17/03 (Rand Stratum)	HMW-3 12/18/03 (EPA Stratum)	Dup-01 (HMW-3) 12/18/03 (EPA Stratum)	HMW-4 12/18/03 (Rand Stratum)	HMW-7 12/17/03 (Rand Stratum)	HMW-21 12/17/03 (Multiple Strata)	RW-1 12/18/03 (Main Sand)	Dup-02 (RW-1) 12/18/03 (Main Sand)
VOCs (mg/L)	(mg/L)								
1,4-Dioxane	NL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
General Chemistry (mg/L)	(mg/L)								
Cyanide	0.2	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
VOCs (µg/L)	(µg/L)								
1,1,1-Trichloroethane	200	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
1,1-Dichloroethane	700	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
1,2-Dibromoethane	0.05	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
1,2-Dichlorobenzene	600	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
1,2-Dichloroethane	5.0	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
1,3-Dichlorobenzene	NL	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
1,4-Dichlorobenzene	75	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
2-Butanone	NL	<50.0	<1250	<1250	<50.0	<1250	<50.0	<1250	<1250
Benzene	5.0	<2.0	**1110**	**1060**	1.8 J	**2000**	1.3 J	**7660**	**7500**
Carbon disulfide	700	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
Chlorobenzene	100	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
Chloroform	0.2	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
Ethylbenzene	700	<5.0	<125	<125	<5.0	**751**	<5.0	309	293
Methyl tert-butyl ether	70	<2.0	<50.0	<50.0	0.8 J	<50.0	<2.0	<50.0	<50.0
Styrene	100	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
Tetrachloroethene	5.0	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
Toluene	1000	<5.0	<125	<125	<5.0	281	1.3 J	**4240**	**4130**
Trichloroethene	5.0	<5.0	<125	<125	<5.0	<125	<5.0	<125	<125
Xylenes (total)	10000	<5.0	34 J	48 J	<5.0	4550	4.0 J	8770	8390

NOTES:

(1) TACO = Illinois EPA's Tiered Approach to Corrective Action Objectives.
mg/L = Milligrams per liter
µg/L = Micrograms per liter
[redacted] = Detection Limit above TACO
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
Bold and highlighted values exceed TACO GROs.
NL = No groundwater remediation objective listed in TACO

TABLE 3-4
Groundwater Analytical Results - Skinner List
Samples Collected December 2003 and April 2004
(Sentinel Wells)

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

CHEMICAL NAME	Taco Tier 1 Groundwater Remediation Objectives (1)	Sentinel Well Number										
	Class I	HMW-25 12/16/03	HMW-25 4/22/04	HMW-26 12/16/03	HMW-26 4/22/04	HMW-27 12/16/03	HMW-27 4/22/04	Dup-01 HMW-27 4/22/04	HMW-28 12/16/03	HMW-28 4/22/04	HMW-29 12/17/03	HMW-29 4/22/04
Metals (mg/L)	(mg/L)											
Barium	2	0.318	0.238	0.362	0.242	0.175	0.189	0.198	0.107	0.273	0.139	0.268
Beryllium	0.004	<0.0010	<0.0010	0.0003 J	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cadmium	0.005	<0.0020	0.0004 J	<0.0020	<0.0020	0.0003 J	<0.0020	<0.0007	<0.0020	0.0011 J	0.0007 J	0.0009 J
Chromium	0.1	0.0098 J	0.0061 J	0.0311	0.0041 J	0.0091 J	<0.0100	<0.0100	0.0059 J	<0.0100	<0.0100	<0.0100
Cobalt	1	0.0045 J	<0.0100	0.0077 J	<0.0100	0.0047 J	0.0089 J	0.0084 J	0.0092 J	0.0145	<0.0100	0.0060 J
Nickel	0.1	0.0178	0.0128	0.0219	<0.0100	0.0112	0.0175	0.0175	0.0221	0.0325	0.0038 J	0.0232
Silver	0.05	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0033 J	<0.0100	<0.0100	0.0065 J	<0.0100
Vanadium	0.049	0.0093 J	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Zinc	5	0.210	0.241	0.276	0.118	0.213	0.0800	0.0910	0.0827	0.0840	0.0258	0.136
Antimony	0.006	<0.0050	0.0023 J	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Arsenic	0.05	0.0011 J	<0.0030	0.0045	0.0065	<0.0030	0.0018 J	0.0012 J	0.0014 J	0.0090	0.0064	0.0066
Lead	0.0075	0.0053	<0.0020	**0.0159**	0.0033	0.0008 J	0.0017 J	0.0026	0.0024	**0.0076**	0.0016 J	**0.0238**
Selenium	0.05	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.0109	<0.0060	<0.0060
SVOCs (mg/L)	(mg/L)											
2,4-Dimethylphenol	0.14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.011	<0.010
2,4-Dinitrophenol	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.011	<0.010
4-Nitrophenol	NL	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.011	<0.010
Bis(2-ethylhexyl)phthalate	0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Di-n-butyl phthalate	0.7	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.011	<0.010
Diethyl phthalate	5.6	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.011	<0.010
Dimethyl phthalate	NL	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.011	<0.010
m,p-Cresol	NL	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.011	<0.010
o-Cresol	0.35	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.011	<0.010
Phenol	0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Pyridine	NL	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.021	<0.020
Quinoline	NL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 3-4
Groundwater Analytical Results - Skinner List
Samples Collected December 2003 and April 2004
(Sentinel Wells)

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

CHEMICAL NAME	Taco Tier 1 Groundwater Remediation Objectives (1)	Sentinel Well Number										
	Class I	HMW-25 12/16/03	HMW-25 4/22/04	HMW-26 12/16/03	HMW-26 4/22/04	HMW-27 12/16/03	HMW-27 4/22/04	Dup-01 HMW-27 4/22/04	HMW-28 12/16/03	HMW-28 4/22/04	HMW-29 12/17/03	HMW-29 4/22/04
SVOCs (mg/L)	(mg/L)											
Acenaphthene	0.42	<0.00500	<0.010	<0.00500	<0.010	<0.00500	<0.010	<0.010	<0.00500	<0.010	<0.00500	<0.010
Anthracene	2.1	<0.00500	<0.010	<0.00500	<0.010	<0.00500	<0.010	<0.010	<0.00500	<0.010	<0.00500	<0.010
Benzo(a)anthracene	0.00013	<0.00010	<0.010	<0.00010	<0.010	<0.00010	<0.010	<0.010	<0.00010	<0.010	<0.00010	<0.010
Benzo(a)pyrene	0.0002	<0.00020	<0.010	<0.00020	<0.010	<0.00020	<0.010	<0.010	<0.00020	<0.010	<0.00020	<0.010
Benzo(b)fluoranthene	0.00018	<0.00018	<0.010	<0.00018	<0.010	<0.00018	<0.010	<0.010	<0.00018	<0.010	<0.00018	<0.010
Benzo(k)fluoranthene	0.00017	<0.00017	<0.010	<0.00017	<0.010	<0.00017	<0.010	<0.010	<0.00017	<0.010	<0.00017	<0.010
Chrysene	0.0015	<0.00080	<0.010	<0.00080	<0.010	<0.00080	<0.010	<0.010	<0.00080	<0.010	<0.00080	<0.010
Dibenzo(a,h)anthracene	0.0003	<0.00030	<0.010	<0.00030	<0.010	<0.00030	<0.010	<0.010	<0.00030	<0.010	<0.00030	<0.010
Fluoranthene	0.28	<0.00200	<0.010	<0.00200	<0.010	<0.00200	<0.010	<0.010	<0.00200	<0.010	<0.00200	<0.010
Fluorene	0.28	<0.00100	<0.010	<0.00100	<0.010	<0.00100	<0.010	<0.010	<0.00100	<0.010	<0.00100	<0.010
Indeno(1,2,3-cd)pyrene	0.00043	<0.00040	<0.010	<0.00040	<0.010	<0.00040	<0.010	<0.010	<0.00040	<0.010	<0.00040	<0.010
Naphthalene	0.14	<0.00500	<0.010	<0.00500	<0.010	<0.00500	<0.010	<0.010	<0.00500	<0.010	<0.00500	<0.010
Phenanthrene	NL	<0.00500	<0.010	<0.00500	<0.010	<0.00500	<0.010	<0.010	<0.00500	<0.010	<0.00500	<0.010
Pyrene	0.21	<0.00200	<0.010	<0.00200	<0.010	<0.00200	<0.010	<0.010	<0.00200	<0.010	<0.00200	<0.010
Metals (mg/L)	(mg/L)											
Mercury	0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
VOCs (mg/L)	(mg/L)											
1,4-Dioxane	NL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
General Chemistry (mg/L)	(mg/L)											
Cyanide	0.2	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	0.004 J	<0.007	0.003 J
VOCs (µg/L)	(µg/L)											
1,1,1-Trichloroethane	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	700	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dibromoethane	0.05	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	600	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

TABLE 3-4
Groundwater Analytical Results - Skinner List
Samples Collected December 2003 and April 2004
(Sentinel Wells)

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

CHEMICAL NAME	Taco Tier 1 Groundwater Remediation Objectives (1)	Sentinel Well Number										
	Class I	HMW-25 12/16/03	HMW-25 4/22/04	HMW-26 12/16/03	HMW-26 4/22/04	HMW-27 12/16/03	HMW-27 4/22/04	Dup-01 HMW-27 4/22/04	HMW-28 12/16/03	HMW-28 4/22/04	HMW-29 12/17/03	HMW-29 4/22/04
VOCs (µg/L)	(µg/L)											
1,3-Dichlorobenzene	NL	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene	75	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Butanone	NL	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Benzene	5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon disulfide	700	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chlorobenzene	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform	0.2	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Ethylbenzene	700	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether	70	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	1000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethene	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Xylenes (total)	10000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

NOTES:

(1) TACO = Illinois EPA's Tiered Approach to Corrective Action Objectives.
mg/L = Milligrams per liter
µg/L = Micrograms per liter
[redacted] = Detection Limit above TACO
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
Bold and highlighted values exceed TACO GROs.
NL = No groundwater remediation objective listed in TACO

TABLE 3-5
Groundwater Analytical Results
BTEX/MTBE

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

CHEMICAL NAME	BORING LOCATION AND SAMPLE DATE							
	HROST-1 2/22/04		HROST-13 2/22/04		HROST-57 2/22/04		HROST-60 2/22/04	
	Result	DQ	Result	DQ	Result	DQ	Result	DQ
Benzene	1.37		15.8		0.014		0.00092	J
Toluene	<0.25		18.1		0.149		0.00662	
Ethylbenzene	<0.25		2.42		0.0654		0.004	J
Xylenes (total)	<0.25		11.1		0.326		0.0183	
MTBE	<0.10		<0.20		<0.002		<0.002	

NOTES:

All results are in milligrams per liter (mg/L).
DQ = Data Qualifier
J = Compound detected below the reporting limit.
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes (total)
MTBE = Methyl Tert-Butyl Ether
Analyses for BTEX and MTBE were conducted using USEPA SW-846 Methods 5030/8260B.

TABLE 3-6
Hydraulic Conductivity Data

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

Well ID	Hydrostratigraphic Status / Unit Screened	Screen Depth (ft bgs)	Date of Test	Prepared By	Analytical Method	Falling Head Test Hydraulic Conductivity (cm/sec)		Rising Head Test Hydraulic Conductivity (cm/sec)		Average Hydraulic Conductivity (cm/sec)	Average Hydraulic Conductivity (ft/sec)	Average Hydraulic Conductivity (ft/day)
HMW-25	Unconfined/Main Sand	24.0-38.7	12/19/03	Clayton	Bouwer & Rice	S	1.40E-02	S	1.80E-02	1.60E-02	5.25E-04	4.54E+01
HMW-27	Unconfined/Main Sand	25.0-39.7	12/19/03	Clayton	Bouwer & Rice	S	1.50E-02	S	2.90E-02	2.20E-02	7.22E-04	6.24E+01
HMW-28	Unconfined/Main Sand	25.0-39.7	12/19/03	Clayton	Bouwer & Rice	S	3.30E-02	S	2.80E-02	3.05E-02	1.00E-03	8.65E+01
HMW-29	Unconfined/Main Sand	25.0-39.7	12/19/03	Clayton	Bouwer & Rice	S	2.30E-02	S	1.40E-02	1.85E-02	6.07E-04	5.24E+01

NOTES:

S = Slug test hydraulic conductivity testing method

Bouwer, H. and R.C. Rice. 1976. A Slug Test Method for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrated Wells. Water Resources Research, Vol. 12, no.3, pp. 423-428.

TABLE 3-7
Hydraulic Conductivity Values
Average Hydraulic Conductivity

The Hartford Working Group / Hartford, Illinois
1190505040 -- Madison County -- ILR 000128249

Study Area Hydrostratigraphic Unit	Monitoring Wells Screened in Hydrostratigraphic Unit	Average Hydraulic Conductivity		
		(cm/sec)	(ft/sec)	(ft/day)
Main Sand	HMW-25, HMW-27, HMW-28, and HMW-29	2.18E-02	7.14E-04	6.17E+01

Geometric Mean Hydraulic Conductivity

Study Area Hydrostratigraphic Unit	Monitoring Wells Screened in Hydrostratigraphic Unit	Geometric Mean Hydraulic Conductivity		
		(cm/sec)	(ft/sec)	(ft/day)
Main Sand	HMW-25, HMW-27, HMW-28, and HMW-29	2.06E-02	6.76E-04	5.84E+01

APPENDIX A

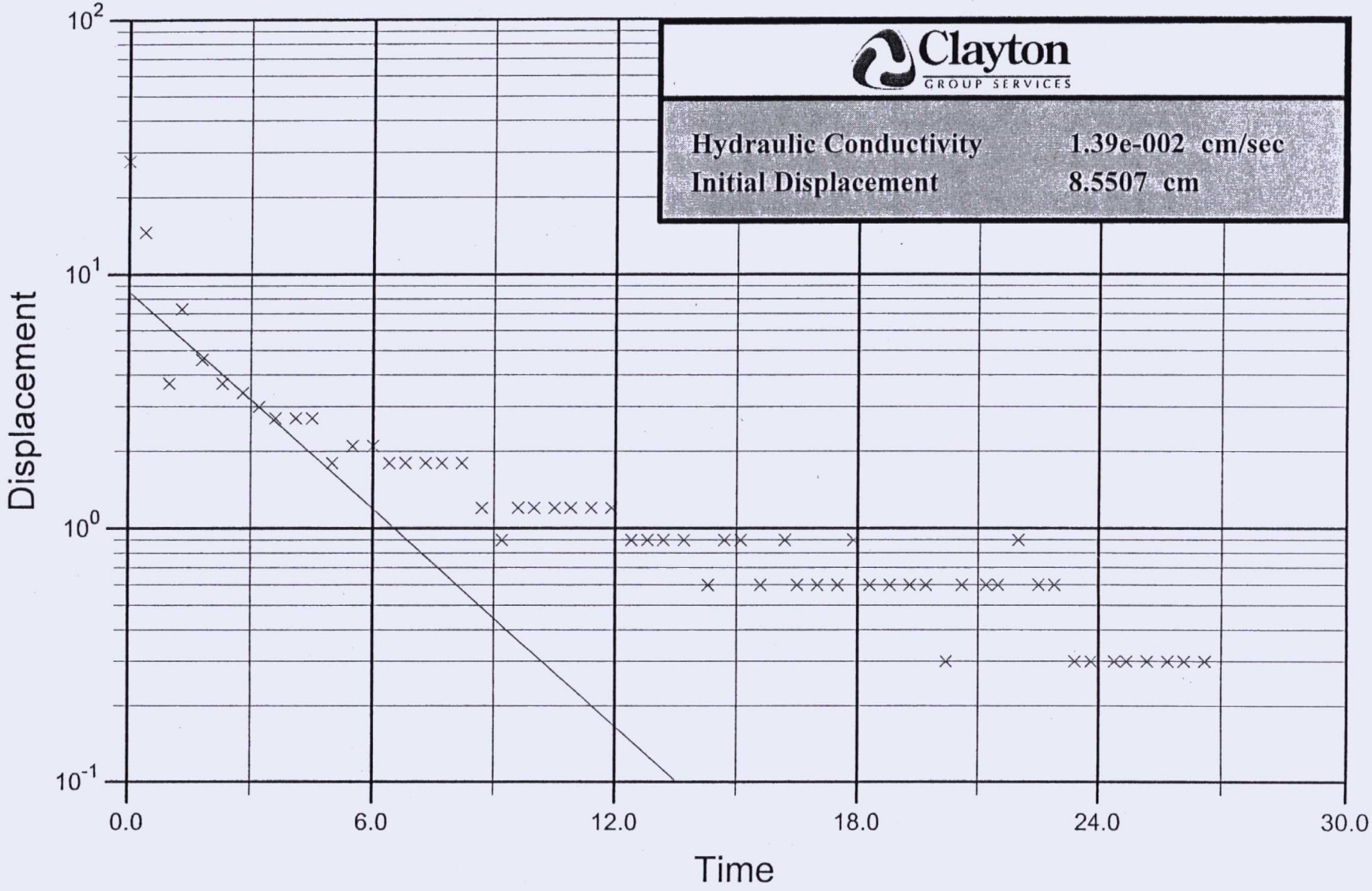
AQUIFER HYDRAULIC TESTING GRAPHS AND DATA

A-1 Graphs
A-2 Testing Data

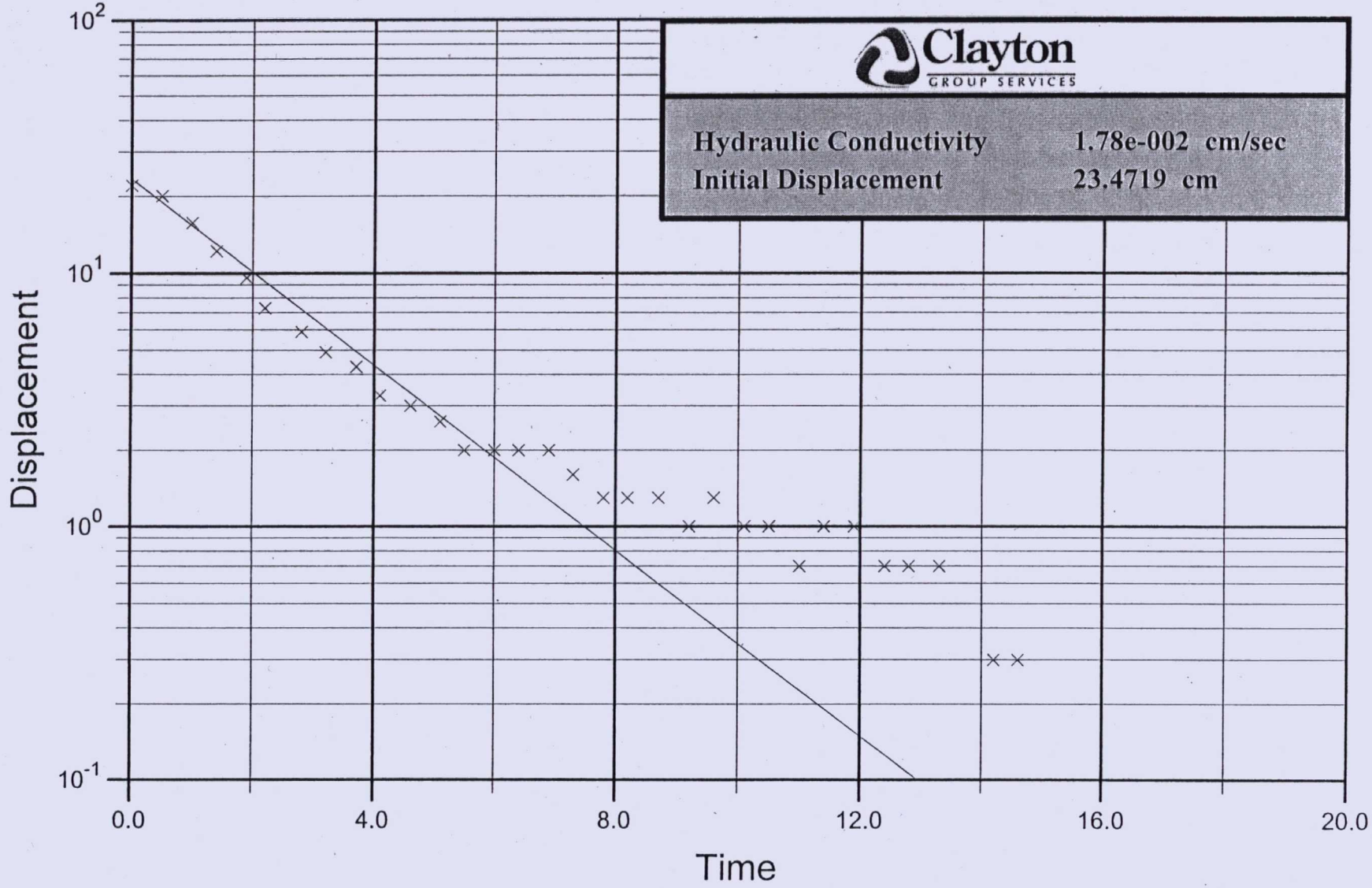
APPENDIX A-1

GRAPHS

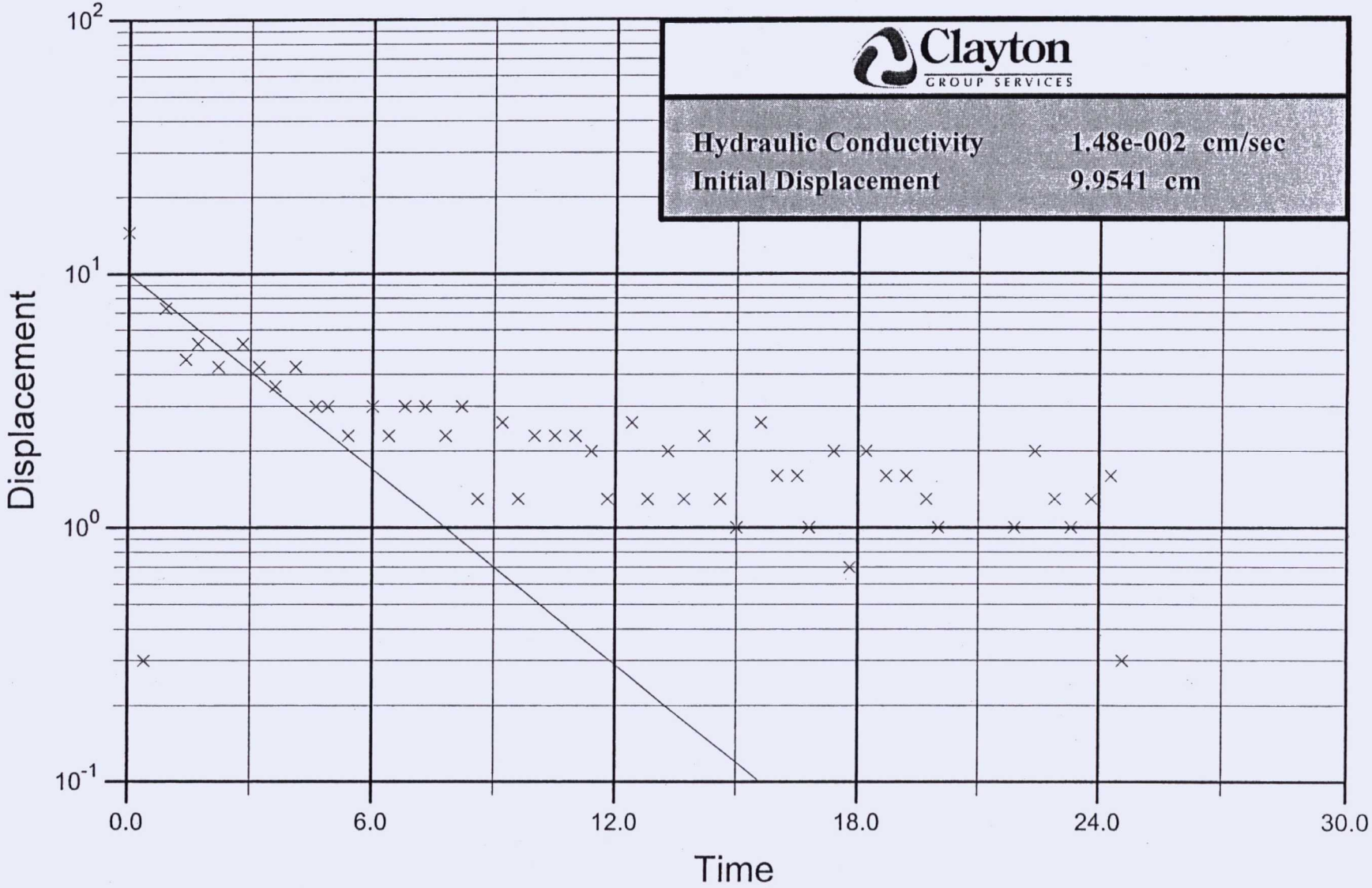
HMW-25 Falling Head



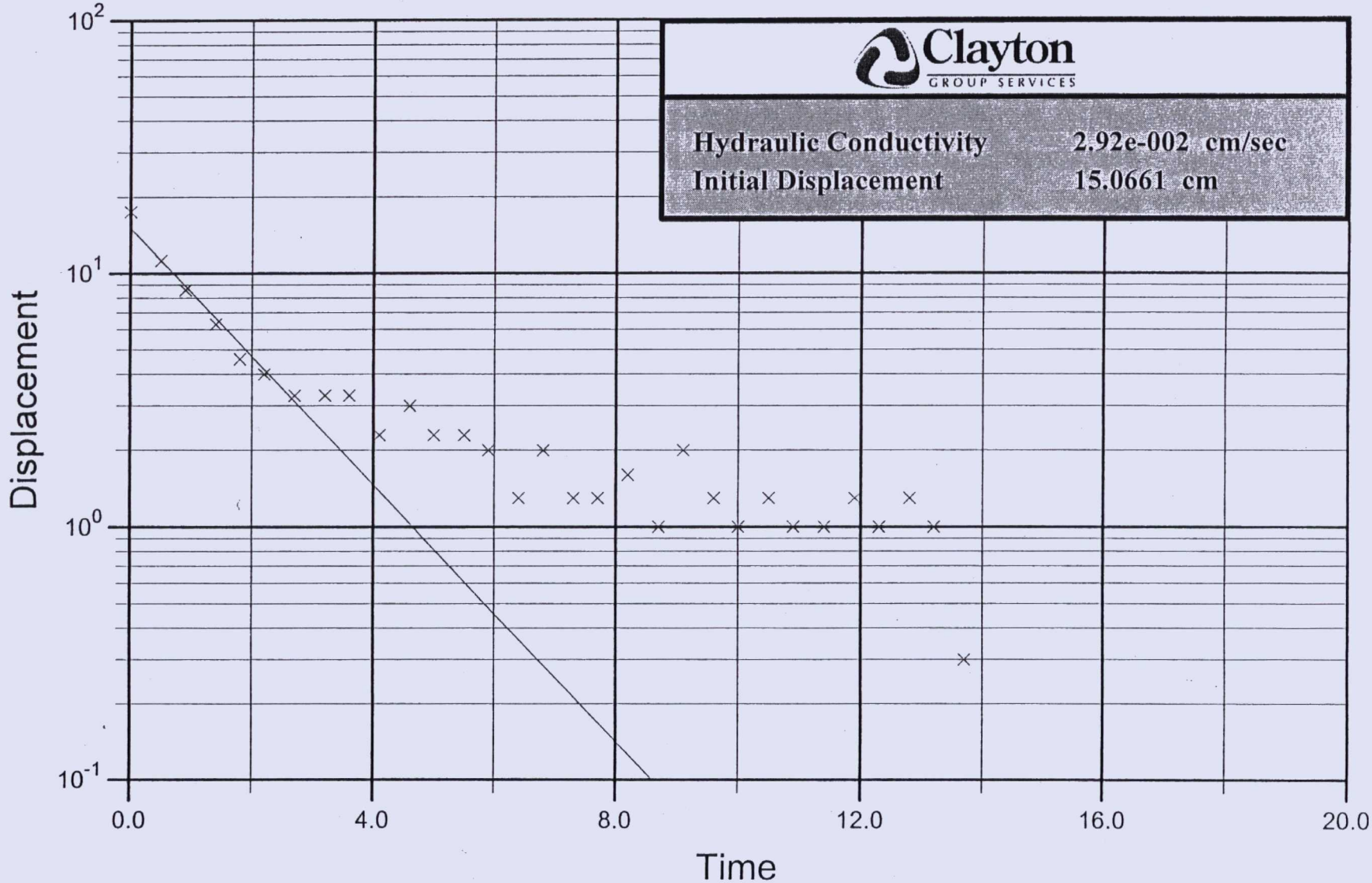
HMW-25 Rising Head



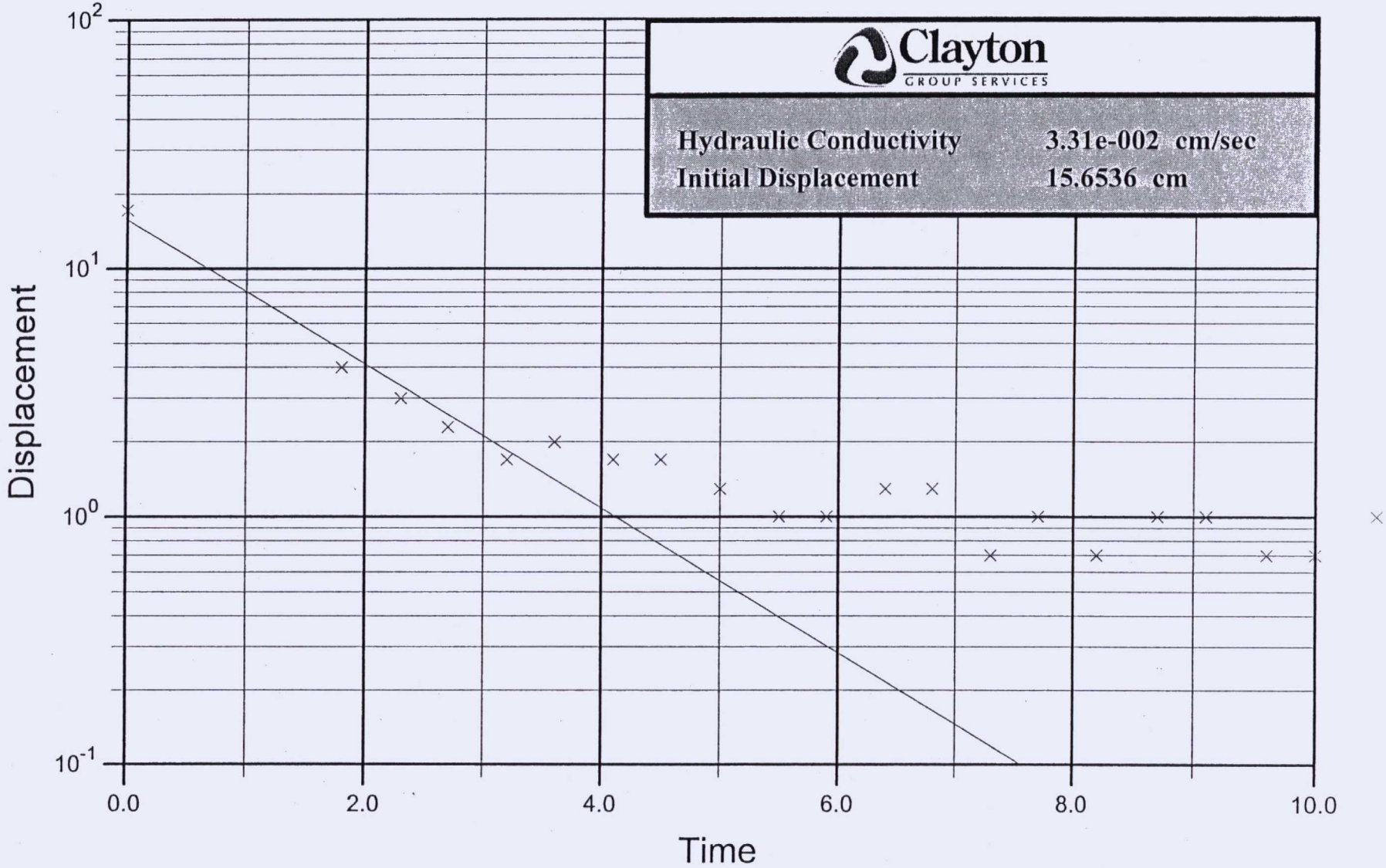
HMW-27 Falling Head



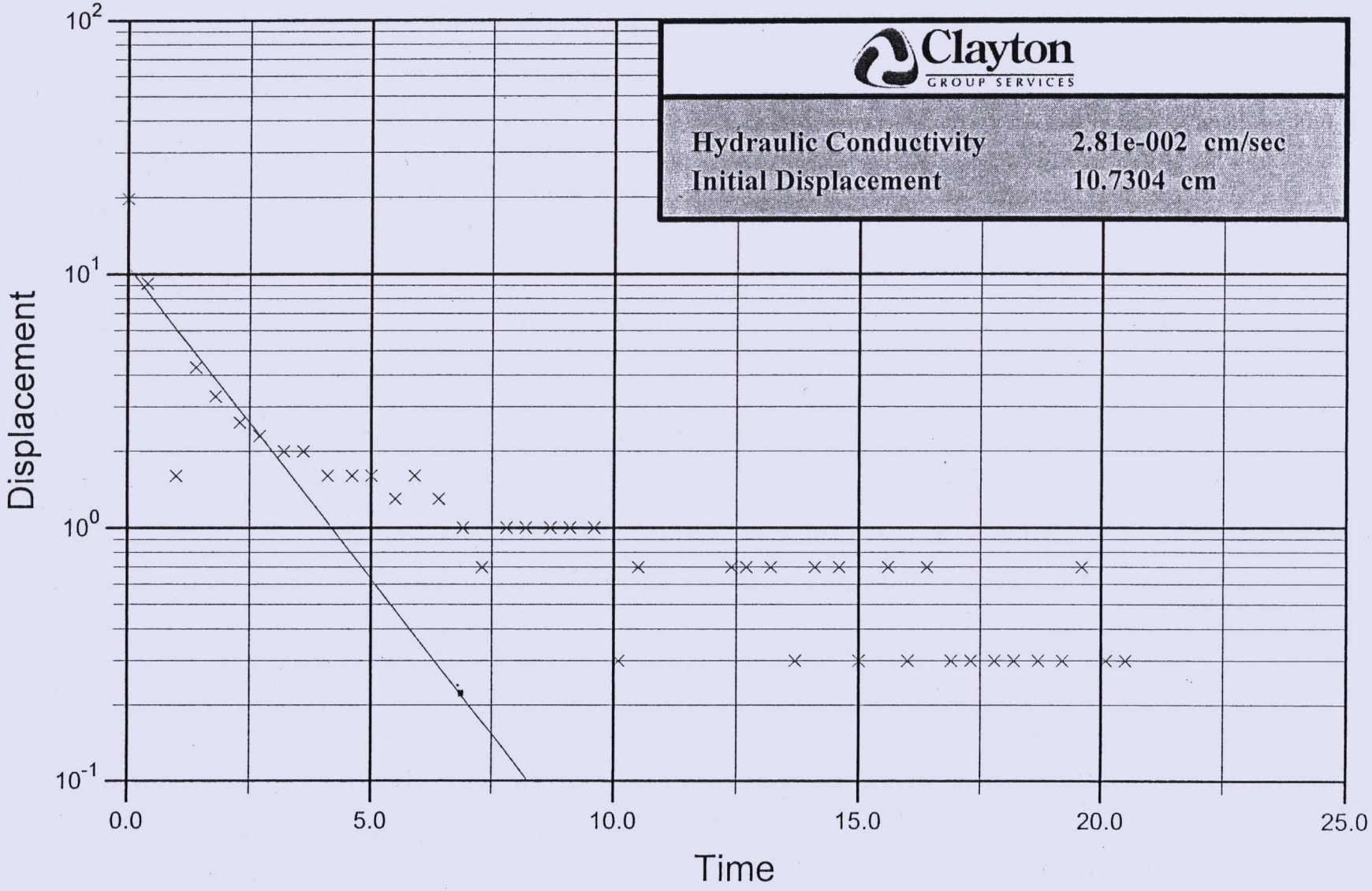
HMW-27 Rising Head



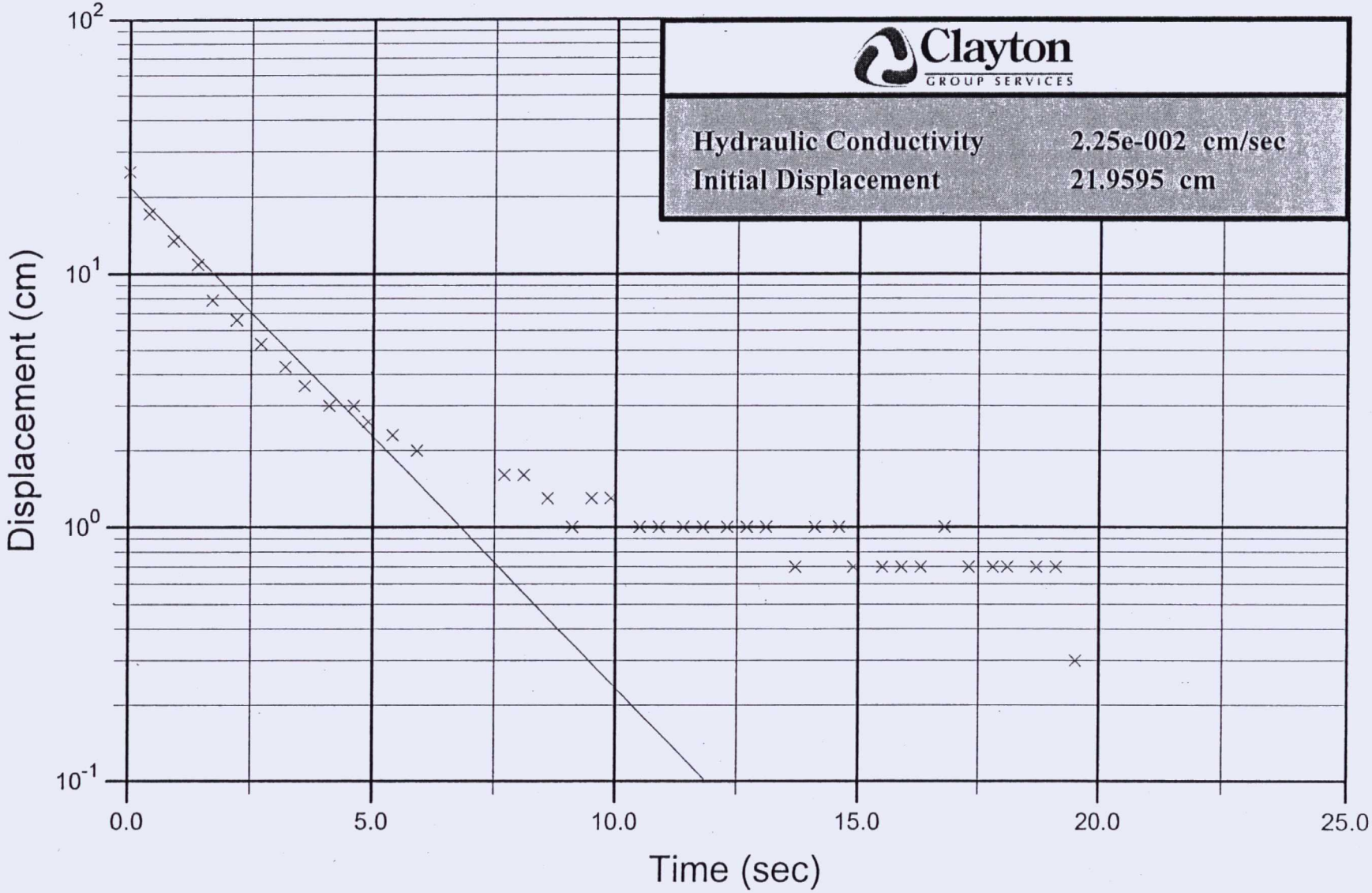
HMW-28 Falling Head



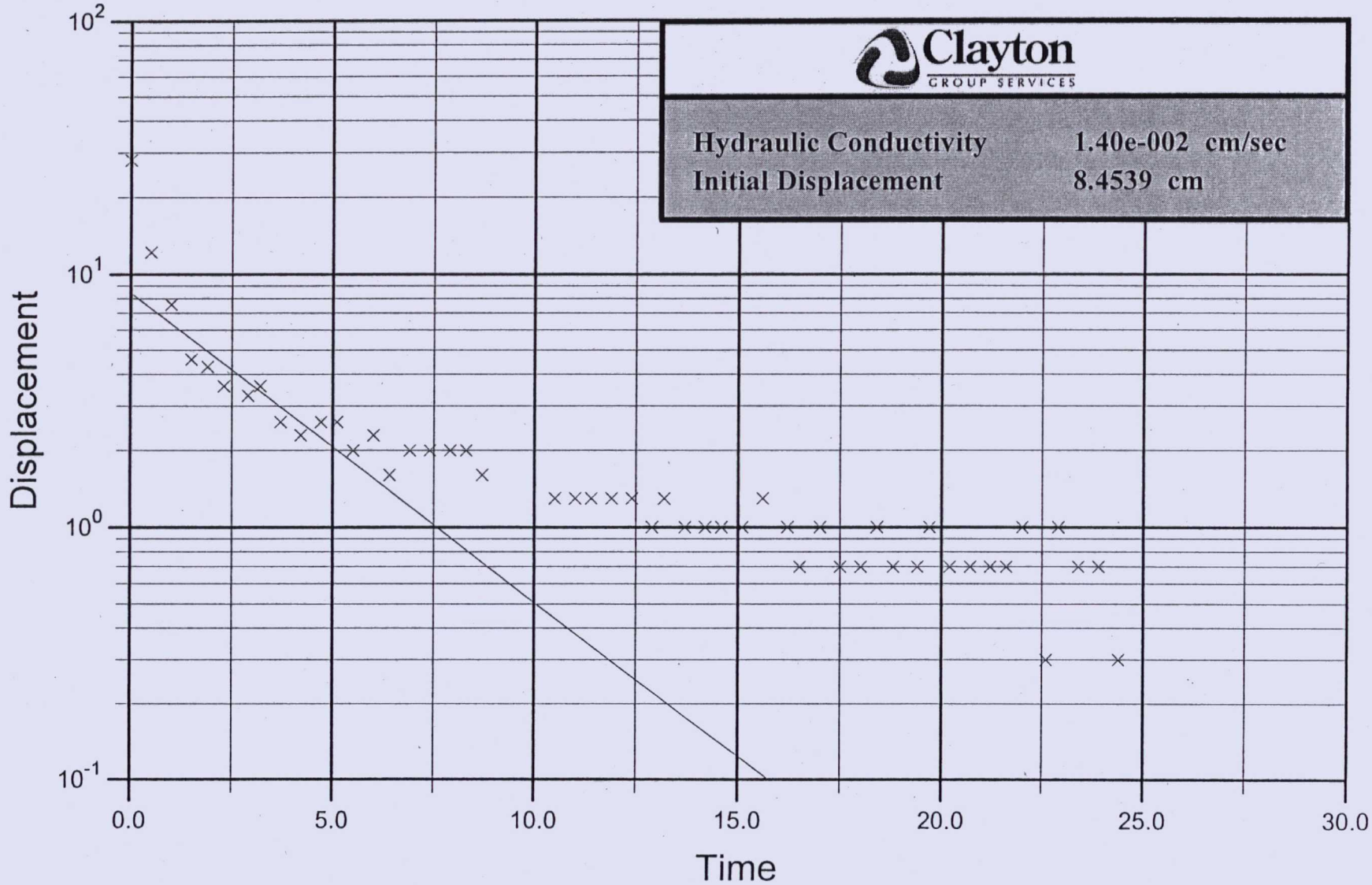
HMW-28 Rising Head



HMW-29 Falling Head



HMW-29 Rising Head



Clayton
GROUP SERVICES

APPENDIX A-2

TESTING DATA

SLUG TEST DATA FOR HMW-25 FALLING HEAD

Project Name: Hartford Work Group
Project Number: 15-0395.12-002

Date : 19-Dec-03
Field Personel: Heidi Mendygral Norman Bolivar

Static Water Column Height Before Test (feet): 8.64E+00

Maximum Displacement of Water Column (cm): 27.7

Data Logger: Aquistar DL-8A
Transducer: 10 psi
Method: Slug Test

Date	Time	Analog#01 AMP..... FT.....	Time (sec)	Displacement (cm)	Displacement (feet)
12/19/03	9:56:49	8.64E+00	-58.0	0.0	0.0
12/19/03	9:57:32	8.64E+00	-14.6	0.0	0.0
12/19/03	9:57:33	8.63E+00	-14.1	-0.3	0.0
12/19/03	9:57:33	8.63E+00	-13.7	-0.3	0.0
12/19/03	9:57:34	8.63E+00	-13.1	-0.3	0.0
12/19/03	9:57:34	8.63E+00	-12.7	-0.3	0.0
12/19/03	9:57:35	8.64E+00	-12.3	0.0	0.0
12/19/03	9:57:35	8.63E+00	-11.8	-0.3	0.0
12/19/03	9:57:36	8.63E+00	-11.4	-0.3	0.0
12/19/03	9:57:36	8.63E+00	-10.9	-0.3	0.0
12/19/03	9:57:37	8.63E+00	-10.5	-0.3	0.0
12/19/03	9:57:37	8.64E+00	-9.9	0.0	0.0
12/19/03	9:57:37	8.65E+00	-9.5	0.3	0.0
12/19/03	9:57:38	8.63E+00	-9.1	-0.3	0.0
12/19/03	9:57:38	8.64E+00	-8.6	0.0	0.0
12/19/03	9:57:39	8.63E+00	-8.2	-0.3	0.0
12/19/03	9:57:39	8.64E+00	-7.7	0.0	0.0
12/19/03	9:57:40	8.64E+00	-7.3	0.0	0.0
12/19/03	9:57:40	8.63E+00	-6.7	-0.3	0.0
12/19/03	9:57:41	8.64E+00	-6.4	0.0	0.0
12/19/03	9:57:41	8.65E+00	-5.9	0.3	0.0
12/19/03	9:57:42	8.64E+00	-5.4	0.0	0.0
12/19/03	9:57:43	8.63E+00	-3.7	-0.3	0.0
12/19/03	9:57:44	8.64E+00	-3.2	0.0	0.0
12/19/03	9:57:44	8.63E+00	-2.8	-0.3	0.0
12/19/03	9:57:45	8.64E+00	-2.2	0.0	0.0
12/19/03	9:57:45	8.64E+00	-1.8	0.0	0.0
12/19/03	9:57:46	8.63E+00	-1.4	-0.3	0.0
12/19/03	9:57:46	8.63E+00	-0.9	-0.3	0.0
12/19/03	9:57:47	9.13E+00	-0.4	14.9	0.5
12/19/03	9:57:47	9.55E+00	0.0	27.7	0.9
12/19/03	9:57:47	9.12E+00	0.4	14.6	0.5
12/19/03	9:57:48	8.76E+00	1.0	3.7	0.1
12/19/03	9:57:48	8.88E+00	1.3	7.3	0.2
12/19/03	9:57:49	8.79E+00	1.8	4.6	0.1
12/19/03	9:57:49	8.76E+00	2.3	3.7	0.1
12/19/03	9:57:50	8.75E+00	2.8	3.4	0.1
12/19/03	9:57:50	8.74E+00	3.2	3.0	0.1
12/19/03	9:57:51	8.73E+00	3.6	2.7	0.1
12/19/03	9:57:51	8.73E+00	4.1	2.7	0.1
12/19/03	9:57:51	8.73E+00	4.5	2.7	0.1

Date	Time	Analog#01 AMP..... FT.....	Time (sec)	Displacement (cm)	Displacement (feet)
12/19/03	9:57:52	8.70E+00	5.0	1.8	0.1
12/19/03	9:57:53	8.71E+00	5.5	2.1	0.1
12/19/03	9:57:53	8.71E+00	6.0	2.1	0.1
12/19/03	9:57:53	8.70E+00	6.4	1.8	0.1
12/19/03	9:57:54	8.70E+00	6.8	1.8	0.1
12/19/03	9:57:54	8.70E+00	7.3	1.8	0.1
12/19/03	9:57:55	8.70E+00	7.7	1.8	0.1
12/19/03	9:57:55	8.70E+00	8.2	1.8	0.1
12/19/03	9:57:56	8.68E+00	8.7	1.2	0.0
12/19/03	9:57:56	8.67E+00	9.2	0.9	0.0
12/19/03	9:57:57	8.68E+00	9.6	1.2	0.0
12/19/03	9:57:57	8.68E+00	10.0	1.2	0.0
12/19/03	9:57:58	8.68E+00	10.5	1.2	0.0
12/19/03	9:57:58	8.68E+00	10.9	1.2	0.0
12/19/03	9:57:58	8.68E+00	11.4	1.2	0.0
12/19/03	9:57:59	8.68E+00	11.9	1.2	0.0
12/19/03	9:57:59	8.67E+00	12.4	0.9	0.0
12/19/03	9:58:00	8.67E+00	12.8	0.9	0.0
12/19/03	9:58:00	8.67E+00	13.2	0.9	0.0
12/19/03	9:58:01	8.67E+00	13.7	0.9	0.0
12/19/03	9:58:01	8.66E+00	14.3	0.6	0.0
12/19/03	9:58:02	8.67E+00	14.7	0.9	0.0
12/19/03	9:58:02	8.67E+00	15.1	0.9	0.0
12/19/03	9:58:03	8.66E+00	15.6	0.6	0.0
12/19/03	9:58:03	8.67E+00	16.2	0.9	0.0
12/19/03	9:58:03	8.66E+00	16.5	0.6	0.0
12/19/03	9:58:04	8.66E+00	17.0	0.6	0.0
12/19/03	9:58:04	8.66E+00	17.5	0.6	0.0
12/19/03	9:58:05	8.67E+00	17.9	0.9	0.0
12/19/03	9:58:05	8.66E+00	18.3	0.6	0.0
12/19/03	9:58:06	8.66E+00	18.8	0.6	0.0
12/19/03	9:58:06	8.66E+00	19.3	0.6	0.0
12/19/03	9:58:07	8.66E+00	19.7	0.6	0.0
12/19/03	9:58:07	8.65E+00	20.2	0.3	0.0
12/19/03	9:58:08	8.66E+00	20.6	0.6	0.0
12/19/03	9:58:08	8.66E+00	21.2	0.6	0.0
12/19/03	9:58:08	8.66E+00	21.5	0.6	0.0
12/19/03	9:58:09	8.67E+00	22.0	0.9	0.0
12/19/03	9:58:09	8.66E+00	22.5	0.6	0.0
12/19/03	9:58:10	8.66E+00	22.9	0.6	0.0
12/19/03	9:58:10	8.65E+00	23.4	0.3	0.0
12/19/03	9:58:11	8.65E+00	23.8	0.3	0.0
12/19/03	9:58:11	8.65E+00	24.4	0.3	0.0
12/19/03	9:58:12	8.65E+00	24.7	0.3	0.0
12/19/03	9:58:12	8.65E+00	25.2	0.3	0.0
12/19/03	9:58:13	8.65E+00	25.7	0.3	0.0
12/19/03	9:58:13	8.65E+00	26.1	0.3	0.0
12/19/03	9:58:14	8.65E+00	26.6	0.3	0.0
12/19/03	9:58:14	8.64E+00	27.0	0.0	0.0
12/19/03	9:58:15	8.65E+00	27.6	0.3	0.0
12/19/03	9:58:15	8.65E+00	27.9	0.3	0.0
12/19/03	9:58:15	8.65E+00	28.4	0.3	0.0
12/19/03	9:58:16	8.65E+00	28.9	0.3	0.0

SLUG TEST DATA FOR HMW-25 RISING HEAD

Project Name: Hartford Work Group
Project Number: 15-0395.12-002

Date : 19-Dec-03
Field Personel: Heidi Mendygral Norman Bolivar

Static Water Column Height Before Test (feet): 8.63E+00

Maximum Displacement of Water Column (cm): 22.4

Data Logger: Aquistar DL-8A
Transducer: 10 psi
Method: Slug Test

Date	Time	Analog#01 AMP..... FT.....	Time (sec)	Displacement (cm)	Displacement (feet)
12/19/03	10:20:40	8.63E+00	-23.0	0.0	0.0
12/19/03	10:20:56	8.63E+00	-6.8	0.0	0.0
12/19/03	10:20:57	8.64E+00	-6.3	-0.3	0.0
12/19/03	10:20:57	8.63E+00	-5.9	0.0	0.0
12/19/03	10:20:58	8.63E+00	-5.4	0.0	0.0
12/19/03	10:20:58	8.64E+00	-5.0	-0.3	0.0
12/19/03	10:20:59	8.64E+00	-4.5	-0.3	0.0
12/19/03	10:20:59	8.65E+00	-4.1	-0.7	0.0
12/19/03	10:20:59	8.65E+00	-3.6	-0.7	0.0
12/19/03	10:21:00	8.64E+00	-3.2	-0.3	0.0
12/19/03	10:21:00	8.64E+00	-2.7	-0.3	0.0
12/19/03	10:21:01	8.63E+00	-2.2	0.0	0.0
12/19/03	10:21:01	8.64E+00	-1.8	-0.3	0.0
12/19/03	10:21:02	8.63E+00	-1.3	0.0	0.0
12/19/03	10:21:02	8.21E+00	-1.0	12.9	-0.4
12/19/03	10:21:03	8.42E+00	-0.4	6.3	-0.2
12/19/03	10:21:03	7.90E+00	0.0	22.1	-0.7
12/19/03	10:21:04	7.97E+00	0.5	20.1	-0.7
12/19/03	10:21:04	8.11E+00	1.0	15.8	-0.5
12/19/03	10:21:04	8.23E+00	1.4	12.2	-0.4
12/19/03	10:21:05	8.32E+00	1.9	9.6	-0.3
12/19/03	10:21:05	8.39E+00	2.2	7.3	-0.2
12/19/03	10:21:06	8.44E+00	2.8	5.9	-0.2
12/19/03	10:21:06	8.47E+00	3.2	4.9	-0.2
12/19/03	10:21:07	8.49E+00	3.7	4.3	-0.1
12/19/03	10:21:07	8.52E+00	4.1	3.3	-0.1
12/19/03	10:21:08	8.53E+00	4.6	3.0	-0.1
12/19/03	10:21:08	8.54E+00	5.1	2.6	-0.1
12/19/03	10:21:09	8.57E+00	5.5	2.0	-0.1
12/19/03	10:21:09	8.57E+00	6.0	2.0	-0.1
12/19/03	10:21:10	8.57E+00	6.4	2.0	-0.1
12/19/03	10:21:10	8.57E+00	6.9	2.0	-0.1
12/19/03	10:21:10	8.58E+00	7.3	1.6	-0.1
12/19/03	10:21:11	8.59E+00	7.8	1.3	0.0
12/19/03	10:21:11	8.59E+00	8.2	1.3	0.0
12/19/03	10:21:12	8.59E+00	8.7	1.3	0.0
12/19/03	10:21:12	8.60E+00	9.2	1.0	0.0
12/19/03	10:21:13	8.59E+00	9.6	1.3	0.0
12/19/03	10:21:13	8.60E+00	10.1	1.0	0.0
12/19/03	10:21:14	8.60E+00	10.5	1.0	0.0
12/19/03	10:21:14	8.61E+00	11.0	0.7	0.0
12/19/03	10:21:15	8.60E+00	11.4	1.0	0.0
12/19/03	10:21:15	8.60E+00	11.9	1.0	0.0
12/19/03	10:21:15	8.61E+00	12.4	0.7	0.0
12/19/03	10:21:16	8.61E+00	12.8	0.7	0.0
12/19/03	10:21:16	8.61E+00	13.3	0.7	0.0
12/19/03	10:21:17	8.60E+00	13.7	1.0	0.0
12/19/03	10:21:17	8.62E+00	14.2	0.3	0.0

SLUG TEST DATA FOR HMW-27 FALLING HEAD

Project Name: Hartford Work Group
Project Number: 15-0395.12-002

Date : 19-Dec-03
Field Personel: Heidi Mendygral Norman Bolivar

Static Water Column Height Before Test (feet): 7.23E+00

Maximum Displacement of Water Column (cm): 14.5

Data Logger: Aquistar DL-8A
Transducer: 10 psi
Method: Slug Test

Date	Time	Analog#01 AMP..... FT.....	Time (sec)	Displacement (cm)	Displacement (feet)
12/19/03	12:22:27	7.23E+00	-22.1	0.0	0.0
12/19/03	12:22:43	7.24E+00	-6.0	0.3	0.0
12/19/03	12:22:43	7.27E+00	-5.5	1.0	0.0
12/19/03	12:22:44	7.25E+00	-5.0	0.7	0.0
12/19/03	12:22:44	7.28E+00	-4.7	1.3	0.0
12/19/03	12:22:45	7.25E+00	-4.1	0.7	0.0
12/19/03	12:22:45	7.27E+00	-3.6	1.0	0.0
12/19/03	12:22:46	7.27E+00	-3.2	1.0	0.0
12/19/03	12:22:46	7.23E+00	-2.8	0.0	0.0
12/19/03	12:22:47	7.25E+00	-2.3	0.7	0.0
12/19/03	12:22:47	7.23E+00	-1.8	0.0	0.0
12/19/03	12:22:47	7.37E+00	-1.5	4.3	0.1
12/19/03	12:22:48	7.62E+00	-1.0	11.9	0.4
12/19/03	12:22:48	7.70E+00	-0.4	14.2	0.5
12/19/03	12:22:49	7.71E+00	0.0	14.5	0.5
12/19/03	12:22:49	7.24E+00	0.4	0.3	0.0
12/19/03	12:22:50	7.47E+00	0.9	7.3	0.2
12/19/03	12:22:50	7.38E+00	1.4	4.6	0.2
12/19/03	12:22:51	7.41E+00	1.7	5.3	0.2
12/19/03	12:22:51	7.37E+00	2.2	4.3	0.1
12/19/03	12:22:52	7.41E+00	2.8	5.3	0.2
12/19/03	12:22:52	7.37E+00	3.2	4.3	0.1
12/19/03	12:22:52	7.35E+00	3.6	3.6	0.1
12/19/03	12:22:53	7.37E+00	4.1	4.3	0.1
12/19/03	12:22:53	7.33E+00	4.6	3.0	0.1
12/19/03	12:22:54	7.33E+00	4.9	3.0	0.1
12/19/03	12:22:54	7.31E+00	5.4	2.3	0.1
12/19/03	12:22:55	7.33E+00	6.0	3.0	0.1
12/19/03	12:22:55	7.31E+00	6.4	2.3	0.1
12/19/03	12:22:56	7.33E+00	6.8	3.0	0.1
12/19/03	12:22:56	7.33E+00	7.3	3.0	0.1
12/19/03	12:22:57	7.31E+00	7.8	2.3	0.1
12/19/03	12:22:57	7.33E+00	8.2	3.0	0.1
12/19/03	12:22:57	7.28E+00	8.6	1.3	0.0
12/19/03	12:22:58	7.32E+00	9.2	2.6	0.1
12/19/03	12:22:58	7.28E+00	9.6	1.3	0.0
12/19/03	12:22:59	7.31E+00	10.0	2.3	0.1
12/19/03	12:22:59	7.31E+00	10.5	2.3	0.1
12/19/03	12:23:00	7.31E+00	11.0	2.3	0.1
12/19/03	12:23:00	7.30E+00	11.4	2.0	0.1
12/19/03	12:23:01	7.28E+00	11.8	1.3	0.0
12/19/03	12:23:01	7.32E+00	12.4	2.6	0.1
12/19/03	12:23:02	7.28E+00	12.8	1.3	0.0
12/19/03	12:23:02	7.30E+00	13.3	2.0	0.1
12/19/03	12:23:02	7.28E+00	13.7	1.3	0.0
12/19/03	12:23:03	7.31E+00	14.2	2.3	0.1
12/19/03	12:23:03	7.28E+00	14.6	1.3	0.0
12/19/03	12:23:04	7.27E+00	15.0	1.0	0.0
12/19/03	12:23:04	7.32E+00	15.6	2.6	0.1
12/19/03	12:23:05	7.29E+00	16.0	1.6	0.1
12/19/03	12:23:05	7.29E+00	16.5	1.6	0.1
12/19/03	12:23:06	7.27E+00	16.8	1.0	0.0
12/19/03	12:23:06	7.30E+00	17.4	2.0	0.1
12/19/03	12:23:07	7.25E+00	17.8	0.7	0.0
12/19/03	12:23:07	7.30E+00	18.2	2.0	0.1
12/19/03	12:23:08	7.29E+00	18.7	1.6	0.1
12/19/03	12:23:08	7.29E+00	19.2	1.6	0.1
12/19/03	12:23:09	7.28E+00	19.7	1.3	0.0
12/19/03	12:23:09	7.27E+00	20.0	1.0	0.0
12/19/03	12:23:11	7.27E+00	21.9	1.0	0.0
12/19/03	12:23:11	7.30E+00	22.4	2.0	0.1
12/19/03	12:23:12	7.28E+00	22.9	1.3	0.0
12/19/03	12:23:12	7.27E+00	23.3	1.0	0.0
12/19/03	12:23:13	7.28E+00	23.8	1.3	0.0
12/19/03	12:23:13	7.29E+00	24.3	1.6	0.1
12/19/03	12:23:13	7.24E+00	24.6	0.3	0.0

SLUG TEST DATA FOR HMW-27 RISING HEAD

Project Name: Hartford Work Group
Project Number: 15-0395.12-002

Date : 19-Dec-03
Field Personel: Heidi Mendygral Norman Bolivar

Static Water Column Height Before Test (feet): 7.25E+00

Maximum Displacement of Water Column (cm): 17.5

Data Logger: Aquistar DL-8A
Transducer: 10 psi
Method: Slug Test

Date	Time	Analog#01 AMP..... FT.....	Time (sec)	Displacement (cm)	Displacement (feet)
12/19/03	12:36:27	7.25E+00	-24.7	0.0	0.0
12/19/03	12:36:47	7.28E+00	-5.4	-0.7	0.0
12/19/03	12:36:47	7.28E+00	-5.0	-0.7	0.0
12/19/03	12:36:49	7.25E+00	-3.2	0.0	0.0
12/19/03	12:36:49	7.25E+00	-2.7	0.0	0.0
12/19/03	12:36:50	7.28E+00	-2.3	-0.7	0.0
12/19/03	12:36:50	7.27E+00	-1.8	-0.3	0.0
12/19/03	12:36:51	7.09E+00	-1.4	4.9	-0.2
12/19/03	12:36:51	6.95E+00	-1.0	9.2	-0.3
12/19/03	12:36:51	6.74E+00	-0.5	15.8	-0.5
12/19/03	12:36:52	6.68E+00	0.0	17.5	-0.6
12/19/03	12:36:53	6.89E+00	0.5	11.2	-0.4
12/19/03	12:36:53	6.97E+00	0.9	8.6	-0.3
12/19/03	12:36:53	7.05E+00	1.4	6.3	-0.2
12/19/03	12:36:54	7.10E+00	1.8	4.6	-0.2
12/19/03	12:36:54	7.12E+00	2.2	4.0	-0.1
12/19/03	12:36:55	7.15E+00	2.7	3.3	-0.1
12/19/03	12:36:55	7.15E+00	3.2	3.3	-0.1
12/19/03	12:36:56	7.15E+00	3.6	3.3	-0.1
12/19/03	12:36:56	7.18E+00	4.1	2.3	-0.1
12/19/03	12:36:57	7.16E+00	4.6	3.0	-0.1
12/19/03	12:36:57	7.18E+00	5.0	2.3	-0.1
12/19/03	12:36:58	7.18E+00	5.5	2.3	-0.1
12/19/03	12:36:58	7.19E+00	5.9	2.0	-0.1
12/19/03	12:36:58	7.21E+00	6.4	1.3	0.0
12/19/03	12:36:59	7.19E+00	6.8	2.0	-0.1
12/19/03	12:36:59	7.21E+00	7.3	1.3	0.0
12/19/03	12:37:00	7.21E+00	7.7	1.3	0.0
12/19/03	12:37:00	7.20E+00	8.2	1.6	-0.1
12/19/03	12:37:01	7.22E+00	8.7	1.0	0.0
12/19/03	12:37:01	7.19E+00	9.1	2.0	-0.1
12/19/03	12:37:02	7.21E+00	9.6	1.3	0.0
12/19/03	12:37:02	7.22E+00	10.0	1.0	0.0
12/19/03	12:37:02	7.21E+00	10.5	1.3	0.0
12/19/03	12:37:03	7.22E+00	10.9	1.0	0.0
12/19/03	12:37:03	7.22E+00	11.4	1.0	0.0
12/19/03	12:37:04	7.21E+00	11.9	1.3	0.0
12/19/03	12:37:04	7.22E+00	12.3	1.0	0.0
12/19/03	12:37:05	7.21E+00	12.8	1.3	0.0
12/19/03	12:37:05	7.22E+00	13.2	1.0	0.0
12/19/03	12:37:06	7.24E+00	13.7	0.3	0.0

SLUG TEST DATA FOR HMW-28 FALLING HEAD

Project Name: Hartford Work Group
Project Number: 15-0395.12-002

Date : 19-Dec-03
Field Personel: Heidi Mendygral Norman Bolivar

Static Water Column Height Before Test (feet): 7.22E+00

Maximum Displacement of Water Column (cm): 17.2

Data Logger: Aquistar DL-8A
Transducer: 10 psi
Method: Slug Test

Date	Time	Analog#01 AMP..... FT.....
19-Dec-03	1:19:25 PM	7.22E+00
19-Dec-03	1:19:42 PM	7.20E+00
19-Dec-03	1:19:43 PM	7.21E+00
19-Dec-03	1:19:43 PM	7.22E+00
19-Dec-03	1:19:44 PM	7.22E+00
19-Dec-03	1:19:44 PM	7.23E+00
19-Dec-03	1:19:44 PM	7.21E+00
19-Dec-03	1:19:45 PM	7.11E+00
19-Dec-03	1:19:45 PM	6.82E+00
19-Dec-03	1:19:46 PM	6.83E+00
19-Dec-03	1:19:46 PM	6.66E+00
19-Dec-03	1:19:48 PM	7.09E+00
19-Dec-03	1:19:49 PM	7.12E+00
19-Dec-03	1:19:49 PM	7.15E+00
19-Dec-03	1:19:49 PM	7.17E+00
19-Dec-03	1:19:50 PM	7.16E+00
19-Dec-03	1:19:50 PM	7.17E+00
19-Dec-03	1:19:51 PM	7.17E+00
19-Dec-03	1:19:51 PM	7.18E+00
19-Dec-03	1:19:52 PM	7.19E+00
19-Dec-03	1:19:52 PM	7.19E+00
19-Dec-03	1:19:53 PM	7.18E+00
19-Dec-03	1:19:53 PM	7.18E+00
19-Dec-03	1:19:54 PM	7.20E+00
19-Dec-03	1:19:54 PM	7.19E+00
19-Dec-03	1:19:55 PM	7.20E+00
19-Dec-03	1:19:55 PM	7.19E+00
19-Dec-03	1:19:55 PM	7.19E+00
19-Dec-03	1:19:56 PM	7.20E+00
19-Dec-03	1:19:56 PM	7.20E+00
19-Dec-03	1:19:57 PM	7.19E+00
19-Dec-03	1:19:57 PM	7.20E+00
19-Dec-03	1:19:58 PM	7.20E+00
19-Dec-03	1:19:58 PM	7.20E+00
19-Dec-03	1:19:59 PM	7.20E+00
19-Dec-03	1:19:59 PM	7.19E+00
19-Dec-03	1:20:00 PM	7.21E+00

Time (sec)	Displacement (cm)	Displacement (feet)
-20.8	0.0	0.0
-4.1	0.7	0.0
-3.6	0.3	0.0
-3.2	0.0	0.0
-2.7	0.0	0.0
-2.2	-0.3	0.0
-1.8	0.3	0.0
-1.3	3.3	0.1
-0.9	12.2	0.4
-0.4	11.9	0.4
0.0	17.2	0.6
1.8	4.0	0.1
2.3	3.0	0.1
2.7	2.3	0.1
3.2	1.7	0.1
3.6	2.0	0.1
4.1	1.7	0.1
4.5	1.7	0.1
5.0	1.3	0.0
5.5	1.0	0.0
5.9	1.0	0.0
6.4	1.3	0.0
6.8	1.3	0.0
7.3	0.7	0.0
7.7	1.0	0.0
8.2	0.7	0.0
8.7	1.0	0.0
9.1	1.0	0.0
9.6	0.7	0.0
10.0	0.7	0.0
10.5	1.0	0.0
10.9	0.7	0.0
11.4	0.7	0.0
11.9	0.7	0.0
12.3	0.7	0.0
12.8	1.0	0.0
13.2	0.3	0.0

SLUG TEST DATA FOR HMW-28 RISING HEAD

Project Name: Hartford Work Group
Project Number: 15-0395.12-002

Date : 19-Dec-03
Field Personel: Heidi Mendygral Norman Bolivar

Static Water Column Height Before Test (feet): 7.22E+00

Maximum Displacement of Water Column (cm): 19.8

Data Logger: Aquistar DL-8A
Transducer: 10 psi
Method: Slug Test

Date	Time	Analog#01 AMP..... FT.....	Time (sec)	Displacement (cm)	Displacement (feet)
19-Dec-03	1:08:53 PM	7.22E+00	-13.8	0.0	0.0
19-Dec-03	1:09:03 PM	7.22E+00	-4.6	0.0	0.0
19-Dec-03	1:09:03 PM	7.22E+00	-4.1	0.0	0.0
19-Dec-03	1:09:04 PM	7.21E+00	-3.7	0.3	0.0
19-Dec-03	1:09:04 PM	7.21E+00	-3.2	0.3	0.0
19-Dec-03	1:09:05 PM	7.21E+00	-2.8	0.3	0.0
19-Dec-03	1:09:05 PM	7.22E+00	-2.2	0.0	0.0
19-Dec-03	1:09:05 PM	7.22E+00	-1.9	0.0	0.0
19-Dec-03	1:09:06 PM	7.22E+00	-1.4	0.0	0.0
19-Dec-03	1:09:06 PM	7.23E+00	-0.9	0.3	0.0
19-Dec-03	1:09:07 PM	7.69E+00	-0.5	14.2	0.5
19-Dec-03	1:09:07 PM	7.87E+00	0.0	19.8	0.6
19-Dec-03	1:09:08 PM	7.53E+00	0.4	9.2	0.3
19-Dec-03	1:09:08 PM	7.28E+00	1.0	1.6	0.1
19-Dec-03	1:09:09 PM	7.36E+00	1.4	4.3	0.1
19-Dec-03	1:09:09 PM	7.33E+00	1.8	3.3	0.1
19-Dec-03	1:09:10 PM	7.31E+00	2.3	2.6	0.1
19-Dec-03	1:09:10 PM	7.30E+00	2.7	2.3	0.1
19-Dec-03	1:09:10 PM	7.29E+00	3.2	2.0	0.1
19-Dec-03	1:09:11 PM	7.29E+00	3.6	2.0	0.1
19-Dec-03	1:09:11 PM	7.28E+00	4.1	1.6	0.1
19-Dec-03	1:09:12 PM	7.28E+00	4.6	1.6	0.1
19-Dec-03	1:09:12 PM	7.28E+00	5.0	1.6	0.1
19-Dec-03	1:09:13 PM	7.27E+00	5.5	1.3	0.0
19-Dec-03	1:09:13 PM	7.28E+00	5.9	1.6	0.1
19-Dec-03	1:09:14 PM	7.27E+00	6.4	1.3	0.0
19-Dec-03	1:09:14 PM	7.25E+00	6.9	1.0	0.0
19-Dec-03	1:09:15 PM	7.24E+00	7.3	0.7	0.0
19-Dec-03	1:09:15 PM	7.25E+00	7.8	1.0	0.0
19-Dec-03	1:09:15 PM	7.25E+00	8.2	1.0	0.0
19-Dec-03	1:09:16 PM	7.25E+00	8.7	1.0	0.0
19-Dec-03	1:09:16 PM	7.25E+00	9.1	1.0	0.0
19-Dec-03	1:09:17 PM	7.25E+00	9.6	1.0	0.0
19-Dec-03	1:09:17 PM	7.23E+00	10.1	0.3	0.0
19-Dec-03	1:09:18 PM	7.24E+00	10.5	0.7	0.0
19-Dec-03	1:09:20 PM	7.24E+00	12.4	0.7	0.0
19-Dec-03	1:09:20 PM	7.24E+00	12.7	0.7	0.0
19-Dec-03	1:09:21 PM	7.24E+00	13.2	0.7	0.0
19-Dec-03	1:09:21 PM	7.23E+00	13.7	0.3	0.0
19-Dec-03	1:09:21 PM	7.24E+00	14.1	0.7	0.0
19-Dec-03	1:09:22 PM	7.24E+00	14.6	0.7	0.0
19-Dec-03	1:09:22 PM	7.23E+00	15.0	0.3	0.0
19-Dec-03	1:09:23 PM	7.24E+00	15.6	0.7	0.0
19-Dec-03	1:09:23 PM	7.23E+00	16.0	0.3	0.0
19-Dec-03	1:09:24 PM	7.24E+00	16.4	0.7	0.0
19-Dec-03	1:09:24 PM	7.23E+00	16.9	0.3	0.0
19-Dec-03	1:09:25 PM	7.23E+00	17.3	0.3	0.0
19-Dec-03	1:09:25 PM	7.23E+00	17.8	0.3	0.0
19-Dec-03	1:09:26 PM	7.23E+00	18.2	0.3	0.0
19-Dec-03	1:09:26 PM	7.23E+00	18.7	0.3	0.0
19-Dec-03	1:09:26 PM	7.23E+00	19.2	0.3	0.0
19-Dec-03	1:09:27 PM	7.24E+00	19.6	0.7	0.0
19-Dec-03	1:09:27 PM	7.23E+00	20.1	0.3	0.0
19-Dec-03	1:09:28 PM	7.23E+00	20.5	0.3	0.0
19-Dec-03	1:09:28 PM	7.22E+00	21.0	0.0	0.0

SLUG TEST DATA FOR HMW-29 FALLING HEAD

Project Name: Hartford Work Group
Project Number: 15-0395.12-002

Date : 19-Dec-03
Field Personel: Heidi Mendygral Norman Bolivar

Static Water Column Height Before Test (feet): 8.21E+00

Maximum Displacement of Water Column (cm): 25.1

Data Logger: Aquistar DL-8A
Transducer: 10 psi
Method: Slug Test

Date	Time	Analog#01 AMP..... FT.....	Time (sec)	Displacement (cm)	Displacement (ft)
19-Dec-03	11:36:17 AM	8.21E+00	-12.6	0.0	0.0
19-Dec-03	11:36:24 AM	8.21E+00	-6.0	0.0	0.0
19-Dec-03	11:36:25 AM	8.22E+00	-5.5	-0.3	0.0
19-Dec-03	11:36:25 AM	8.21E+00	-5.0	0.0	0.0
19-Dec-03	11:36:25 AM	8.21E+00	-4.7	0.0	0.0
19-Dec-03	11:36:26 AM	8.22E+00	-4.1	-0.3	0.0
19-Dec-03	11:36:26 AM	8.20E+00	-3.6	0.3	0.0
19-Dec-03	11:36:27 AM	8.21E+00	-3.2	0.0	0.0
19-Dec-03	11:36:27 AM	8.22E+00	-2.8	-0.3	0.0
19-Dec-03	11:36:28 AM	8.21E+00	-2.3	0.0	0.0
19-Dec-03	11:36:28 AM	8.22E+00	-1.8	-0.3	0.0
19-Dec-03	11:36:29 AM	8.19E+00	-1.5	0.7	0.0
19-Dec-03	11:36:29 AM	7.76E+00	-1.0	13.5	0.4
19-Dec-03	11:36:30 AM	8.00E+00	-0.4	6.3	0.2
19-Dec-03	11:36:30 AM	7.38E+00	0.0	25.1	0.8
19-Dec-03	11:36:30 AM	7.64E+00	0.4	17.2	0.6
19-Dec-03	11:36:31 AM	7.76E+00	0.9	13.5	0.4
19-Dec-03	11:36:31 AM	7.85E+00	1.4	10.9	0.4
19-Dec-03	11:36:32 AM	7.95E+00	1.7	7.9	0.3
19-Dec-03	11:36:32 AM	7.99E+00	2.2	6.6	0.2
19-Dec-03	11:36:33 AM	8.03E+00	2.7	5.3	0.2
19-Dec-03	11:36:33 AM	8.07E+00	3.2	4.3	0.1
19-Dec-03	11:36:34 AM	8.09E+00	3.6	3.6	0.1
19-Dec-03	11:36:34 AM	8.11E+00	4.1	3.0	0.1
19-Dec-03	11:36:35 AM	8.11E+00	4.6	3.0	0.1
19-Dec-03	11:36:35 AM	8.12E+00	4.9	2.6	0.1
19-Dec-03	11:36:35 AM	8.13E+00	5.4	2.3	0.1
19-Dec-03	11:36:36 AM	8.14E+00	5.9	2.0	0.1
19-Dec-03	11:36:38 AM	8.15E+00	7.7	1.6	0.1
19-Dec-03	11:36:38 AM	8.15E+00	8.1	1.6	0.1
19-Dec-03	11:36:39 AM	8.16E+00	8.6	1.3	0.0
19-Dec-03	11:36:39 AM	8.18E+00	9.1	1.0	0.0
19-Dec-03	11:36:40 AM	8.16E+00	9.5	1.3	0.0
19-Dec-03	11:36:40 AM	8.16E+00	9.9	1.3	0.0
19-Dec-03	11:36:40 AM	8.18E+00	10.5	1.0	0.0
19-Dec-03	11:36:41 AM	8.18E+00	10.9	1.0	0.0
19-Dec-03	11:36:41 AM	8.18E+00	11.4	1.0	0.0
19-Dec-03	11:36:42 AM	8.18E+00	11.8	1.0	0.0
19-Dec-03	11:36:42 AM	8.18E+00	12.3	1.0	0.0
19-Dec-03	11:36:43 AM	8.18E+00	12.7	1.0	0.0
19-Dec-03	11:36:43 AM	8.18E+00	13.1	1.0	0.0
19-Dec-03	11:36:44 AM	8.19E+00	13.7	0.7	0.0
19-Dec-03	11:36:44 AM	8.18E+00	14.1	1.0	0.0
19-Dec-03	11:36:45 AM	8.18E+00	14.6	1.0	0.0
19-Dec-03	11:36:45 AM	8.19E+00	14.9	0.7	0.0
19-Dec-03	11:36:46 AM	8.19E+00	15.5	0.7	0.0
19-Dec-03	11:36:46 AM	8.19E+00	15.9	0.7	0.0
19-Dec-03	11:36:46 AM	8.19E+00	16.3	0.7	0.0
19-Dec-03	11:36:47 AM	8.18E+00	16.8	1.0	0.0
19-Dec-03	11:36:47 AM	8.19E+00	17.3	0.7	0.0
19-Dec-03	11:36:48 AM	8.19E+00	17.8	0.7	0.0
19-Dec-03	11:36:48 AM	8.19E+00	18.1	0.7	0.0
19-Dec-03	11:36:49 AM	8.19E+00	18.7	0.7	0.0
19-Dec-03	11:36:49 AM	8.19E+00	19.1	0.7	0.0
19-Dec-03	11:36:50 AM	8.20E+00	19.5	0.3	0.0

SLUG TEST DATA FOR HMW-29 RISING HEAD

Project Name: Hartford Work Group
Project Number: 15-0395.12-002

Date : 19-Dec-03
Field Personel: Heidi Mendygral Norman Bolivar

Static Water Column Height Before Test (feet): 8.20E+00

Data Logger: Aquistar DL-8A
Transducer: 10 psi
Method: Slug Test

Maximum Displacement of Water Column (cm): 28.1

Date	Time	Analog#01 AMP..... FT.....		Time (sec)	Displacement (cm)	Displacement (ft)
19-Dec-03	11:17:37 AM	0.470565	8.20E+00	-22.6	0.0	0.0
19-Dec-03	11:17:47 AM	0.470679	8.20E+00	-12.7	0.0	0.0
19-Dec-03	11:17:47 AM	0.470684	8.20E+00	-12.3	0.0	0.0
19-Dec-03	11:17:48 AM	0.47069	8.19E+00	-11.8	0.3	0.0
19-Dec-03	11:17:48 AM	0.470694	8.20E+00	-11.4	0.0	0.0
19-Dec-03	11:17:48 AM	0.4707	8.19E+00	-10.9	0.3	0.0
19-Dec-03	11:17:49 AM	0.470705	8.18E+00	-10.5	0.7	0.0
19-Dec-03	11:17:49 AM	0.470711	8.19E+00	-9.9	0.3	0.0
19-Dec-03	11:17:50 AM	0.470716	8.21E+00	-9.5	0.3	0.0
19-Dec-03	11:17:50 AM	0.470721	8.19E+00	-9.1	0.3	0.0
19-Dec-03	11:17:51 AM	0.470727	8.19E+00	-8.6	0.3	0.0
19-Dec-03	11:17:51 AM	0.470731	8.19E+00	-8.2	0.3	0.0
19-Dec-03	11:17:52 AM	0.470737	8.19E+00	-7.7	0.3	0.0
19-Dec-03	11:17:52 AM	0.470742	8.64E+00	-7.3	13.5	0.4
19-Dec-03	11:17:53 AM	0.470748	8.28E+00	-6.7	2.6	0.1
19-Dec-03	11:17:53 AM	0.470753	8.36E+00	-6.3	4.9	0.2
19-Dec-03	11:17:53 AM	0.470758	8.32E+00	-5.9	3.6	0.1
19-Dec-03	11:17:54 AM	0.470764	8.29E+00	-5.4	3.0	0.1
19-Dec-03	11:17:54 AM	0.470769	8.28E+00	-4.9	2.6	0.1
19-Dec-03	11:17:55 AM	0.470774	8.27E+00	-4.5	2.3	0.1
19-Dec-03	11:17:55 AM	0.470779	8.27E+00	-4.1	2.3	0.1
19-Dec-03	11:17:56 AM	0.470785	8.26E+00	-3.5	2.0	0.1
19-Dec-03	11:17:56 AM	0.470789	8.25E+00	-3.2	1.6	0.1
19-Dec-03	11:17:57 AM	0.470795	8.26E+00	-2.7	2.0	0.1
19-Dec-03	11:17:57 AM	0.470801	8.25E+00	-2.2	1.6	0.1
19-Dec-03	11:17:58 AM	0.470806	8.16E+00	-1.7	1.0	0.0
19-Dec-03	11:17:58 AM	0.470811	8.16E+00	-1.3	1.0	0.0
19-Dec-03	11:17:59 AM	0.470816	8.25E+00	-0.9	1.6	0.1
19-Dec-03	11:17:59 AM	0.470822	8.47E+00	-0.3	8.3	0.3
19-Dec-03	11:17:59 AM	0.470826	9.12E+00	0.0	28.1	0.9
19-Dec-03	11:18:00 AM	0.470832	7.80E+00	0.5	12.2	0.4
19-Dec-03	11:18:00 AM	0.470838	8.45E+00	1.0	7.6	0.2
19-Dec-03	11:18:01 AM	0.470843	8.35E+00	1.5	4.6	0.2
19-Dec-03	11:18:01 AM	0.470848	8.34E+00	1.9	4.3	0.1
19-Dec-03	11:18:02 AM	0.470853	8.32E+00	2.3	3.6	0.1
19-Dec-03	11:18:02 AM	0.470859	8.31E+00	2.9	3.3	0.1
19-Dec-03	11:18:03 AM	0.470863	8.32E+00	3.2	3.6	0.1
19-Dec-03	11:18:03 AM	0.470869	8.28E+00	3.7	2.6	0.1
19-Dec-03	11:18:04 AM	0.470875	8.27E+00	4.2	2.3	0.1
19-Dec-03	11:18:04 AM	0.47088	8.28E+00	4.7	2.6	0.1
19-Dec-03	11:18:04 AM	0.470885	8.28E+00	5.1	2.6	0.1
19-Dec-03	11:18:05 AM	0.47089	8.26E+00	5.5	2.0	0.1
19-Dec-03	11:18:05 AM	0.470896	8.27E+00	6.0	2.3	0.1
19-Dec-03	11:18:06 AM	0.4709	8.25E+00	6.4	1.6	0.1
19-Dec-03	11:18:06 AM	0.470906	8.26E+00	6.9	2.0	0.1
19-Dec-03	11:18:07 AM	0.470912	8.26E+00	7.4	2.0	0.1
19-Dec-03	11:18:07 AM	0.470917	8.26E+00	7.9	2.0	0.1
19-Dec-03	11:18:08 AM	0.470922	8.26E+00	8.3	2.0	0.1
19-Dec-03	11:18:08 AM	0.470927	8.25E+00	8.7	1.6	0.1
19-Dec-03	11:18:10 AM	0.470948	8.24E+00	10.5	1.3	0.0
19-Dec-03	11:18:10 AM	0.470953	8.24E+00	11.0	1.3	0.0
19-Dec-03	11:18:11 AM	0.470958	8.24E+00	11.4	1.3	0.0
19-Dec-03	11:18:11 AM	0.470964	8.24E+00	11.9	1.3	0.0
19-Dec-03	11:18:12 AM	0.470969	8.24E+00	12.4	1.3	0.0
19-Dec-03	11:18:12 AM	0.470975	8.23E+00	12.9	1.0	0.0
19-Dec-03	11:18:13 AM	0.470979	8.24E+00	13.2	1.3	0.0
19-Dec-03	11:18:13 AM	0.470985	8.23E+00	13.7	1.0	0.0
19-Dec-03	11:18:14 AM	0.47099	8.23E+00	14.2	1.0	0.0
19-Dec-03	11:18:14 AM	0.470995	8.23E+00	14.6	1.0	0.0
19-Dec-03	11:18:14 AM	0.471001	8.23E+00	15.1	1.0	0.0
19-Dec-03	11:18:15 AM	0.471006	8.24E+00	15.6	1.3	0.0
19-Dec-03	11:18:16 AM	0.471013	8.23E+00	16.2	1.0	0.0
19-Dec-03	11:18:16 AM	0.471017	8.22E+00	16.5	0.7	0.0
19-Dec-03	11:18:16 AM	0.471023	8.23E+00	17.0	1.0	0.0
19-Dec-03	11:18:17 AM	0.471028	8.22E+00	17.5	0.7	0.0
19-Dec-03	11:18:17 AM	0.471034	8.22E+00	18.0	0.7	0.0
19-Dec-03	11:18:18 AM	0.471039	8.23E+00	18.4	1.0	0.0
19-Dec-03	11:18:18 AM	0.471044	8.22E+00	18.8	0.7	0.0
19-Dec-03	11:18:19 AM	0.47105	8.22E+00	19.4	0.7	0.0
19-Dec-03	11:18:19 AM	0.471054	8.23E+00	19.7	1.0	0.0
19-Dec-03	11:18:20 AM	0.47106	8.22E+00	20.2	0.7	0.0
19-Dec-03	11:18:20 AM	0.471066	8.22E+00	20.7	0.7	0.0
19-Dec-03	11:18:21 AM	0.471071	8.22E+00	21.2	0.7	0.0
19-Dec-03	11:18:21 AM	0.471076	8.22E+00	21.6	0.7	0.0
19-Dec-03	11:18:21 AM	0.471081	8.23E+00	22.0	1.0	0.0
19-Dec-03	11:18:22 AM	0.471087	8.21E+00	22.6	0.3	0.0
19-Dec-03	11:18:22 AM	0.471091	8.23E+00	22.9	1.0	0.0
19-Dec-03	11:18:23 AM	0.471097	8.22E+00	23.4	0.7	0.0
19-Dec-03	11:18:23 AM	0.471103	8.22E+00	23.9	0.7	0.0
19-Dec-03	11:18:24 AM	0.471108	8.21E+00	24.4	0.3	0.0

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